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ABSTRACT

Statistical data on research and development (R&D) expenditures from the 1980 Survey of Scientific and Engineering Expenditures at Universities and Colleges are presented. Information was obtained from 514 schools and 19 federally funded R&D centers. In order to provide national totals for academic R&D expenditures, estimates were made for the approximately 9 percent of the survey population that did not respond to the questionnaire. The main items on the questionnaire include: total current expenditures for separately budgeted science and engineering (S/E) R&D by source of funds and the percentage of the total and federally financed portion that is considered basic research; total and federally financed current fund expenditures for separately budgeted R&D activities, by detailed S/E fields, and data in subdisciplines of engineering and environmental sciences; capital expenditures for S/E facilities and equipment for research, development, and instruction by broad S/E fields, including amounts from federal and other sources; and total and federally financed current fund research equipment expenditures disbursed in detailed S/E fields. Information is presented on the distribution of university and college responses by degree level. The highest response rate, 94 percent, was from doctorate-granting institutions where 98 percent of the R&D expenditures in S/E fields were disbursed. Comparative data from previous years are included in the statistical tables. Questionnaires are appended. (SW)

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general notes

The tables in this publication were compiled from the National Science Foundation's (NSF's) annual Survey of Scientific and Engineering Expenditures at Universities and Colleges, FY 1980. A *Science Resources Studies Highlights* containing the analytical results of this survey will be published at a later date.

In the following tables, terms customary to institutional accounting procedures are used. The term "separately budgeted research and development (R&D) expenditures" refers to current fund expenditures which are designed to produce specific research outcomes and are sponsored either by an external agency to an institution or separately budgeted by an internal unit of an institution. The term "expenditures" differs from the Federal accounting term "obligations." Expenditures are funds actually spent by an institution during its fiscal year; obligations are funds designated for the reporting institution during the Federal fiscal year, regardless of when the recipient institution may actually spend the funds. Capital expenditures for science and/or engineering (S/E) facilities and equipment for research, development, and instruction are reported separately from research equipment purchased under separately budgeted project awards. Capital expenditures for R&D equipment may include fixed or movable furnishings and scientific equipment, facilities ancillary or integral to R&D efforts, or special separate facilities to house S/E apparatus, as described in Office of Management Budget (OMB) Circular A-21, revised. Separately budgeted R&D equipment purchased from current funds is defined as any article of nonexpendable tangible personal property having a useful life of more than two years and an acquisition cost of $500 or more per unit, a definition appearing in OMB Circular A-21, revised.

Federally funded research and development centers, referred to in this survey as "FFRDC's," are centers supported by the Federal Government either to meet specific R&D objectives or to provide major facilities for research and associated training purposes.

The terms "imputation" or "imputed data" refer to the computerized process of developing estimates of missing information from institutions that did not furnish such information when requested. This process develops estimates based primarily on key data items reported in prior years' surveys when available, or when not available, bases estimates on figures derived according to peer respondent institutions' characteristics (of highest degree granted and type of institutional control—public or private). Corresponding items are increased or decreased to reflect similar growth or shrinkage experienced by peer institutions.

Data from the current year's tables should be used in reviewing historical information in this survey. Data presented in trend tables are assembled from the most recently completed survey cycle. Since prior-year data are reviewed for consistency with current-year responses and, when necessary, revised in consultation with institutional respondents, references to prior-year data should be restricted to this document.

Response to this survey is entirely voluntary. Requests for additional information concerning the survey findings or purchase of data tapes for the current or prior surveys should be addressed to:

Ms. Judith F. Coakley or Mrs. Marge Machen
Universities and Nonprofit Institutions Studies Group
Division of Sciences Resources Studies
National Science Foundation
Washington, D.C. 20550
(202) 634-4673

section a

technical notes

the universe

The universe for this survey includes 563 institutions in the United States and outlying areas having academic programs in the sciences and engineering that offer a doctorate or a master's degree in those fields, as well as those schools with $50,000 or more in separately budgeted R&D expenditures. In addition, the universe includes 19 FFRDC's. To qualify as a unit in this category, the center must be engaged in basic or applied research, development, or management of R&D activities and must be monitored directly by the Federal Government, usually a single agency, in a relationship expected to be maintained on a long- term basis. It must operate separately from its administrative organization or be incorporated separately. With an average annual budget of at least $500,000 (operating and capital equipment), 70 percent of which is Federal support, the center's facilities are owned or funded under contract by the Federal Government. Data from the 19 FFRDC's are presented separately. Copies of both institutional and FFRDC survey forms (NSF form 411) used in the 1980 survey are included in section d, presenting survey results in aggregate form.

The survey population was reviewed prior to the mailout of the questionnaires to ensure that each institutional classification was accurate. Characteristics of the schools were reviewed before and during the course of the survey to determine if changes had occurred (i.e., reviewed for changes in highest degree granted or for school openings, closings, or mergers). Names of institutions newly added to the *Education Directory, Colleges and Universities, 1980-81*[1] were reviewed to determine their eligibility for inclusion in this survey.

the survey instrument

The questionnaire used in the FY 1980 survey was virtually unchanged from that used in prior years. Most institutions have incorporated the essential information to complete this survey into their recordkeeping systems, and a consistent format from one year to the next is preferred by respondents. Such consistency yields more useful statistics over time.

The survey questionnaire consisted of four main items. Item 1 requested institutions to report their total current expenditures for separately budgeted S/E research and development by source of funds and to indicate the percentage of the total and federally financed portion that is considered basic research.

Item 2 requested total and federally financed current fund expenditures for separately budgeted R&D activities, by detailed S/E fields; data in subdisciplines of engineering and environmental sciences were requested for the first time and hence, on an optional basis. When requests were received by NSF in 1979 for refinement of the data on these two disciplines, NSF polled respondents and found that their recordkeeping systems could yield this breakdown without undue effort. Indeed, most institutions provided the refined data on an optional basis on the 1980 survey. The format for item 2, therefore, will be standard for the survey questionaire beginning in FY 1981. By refining the data on these two disciplines, the results can now be integrated with the findings from several other NSF surveys of academic resources where data on these detailed fields have been collected.

Item 3 requested capital expenditures for S/E facilities and equipment for research, development, and instruction by broad S/E fields, showing amounts from Federal and other sources. By including both capital expenditures and current fund expenditures of S/E funds devoted to R&D activities, the survey provides a comprehensive reporting of such activity at each institution in the survey. This is an important component of statistical information needed by financial and budgetary decisionmakers in policy analysis.

Optional item 4 requested institutions to report total and federally financed current fund research equipment expenditures disbursed in the same detailed disciplines as in item 2. These data are of special interest to Federal policymakers in determining current funding levels for scientific instrumentation. In recent years, reports concerning academic instrumentation shortages and obsolescence were based largely on anecdotal information. In an effort to obtain well-grounded data on the

[1] Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1980-81* (NCES 81-347) (Washington, D.C.: Supt. of Documents, U.S. Government Printing Office).

extent of research equipment expenditures, item 4 was added to the R&D expenditures survey in FY 1979; at the same time, NSF initiated a feasibility study to establish the best method for gathering additional data that could serve as indicators of instrumentation needs. Survey respondents at most institutions have indicated their ability to provide item 4 data in the future as their recordkeeping systems evolve in response to OMB Circular A-21, revised; therefore, item 4 will be a standard part of the survey beginning in FY 1981.

In the interest of improving the data quality and as an aid to respondent institution personnel who are responsible for completing NSF annual survey questionnaires, 1-day workshops are held periodically in various geographic locations prior to the mail-out date to discuss the survey forms and how best to gather information from institutions' accounting and/or budgetary systems. These workshops, sponsored by volunteer respondent institutions or professional societies, are conducted by NSF personnel assisted by institutional experts experienced in survey completion.

the method

The survey questionnaires were mailed in February 1981. Contained in the packet sent to survey respondents at each of the institutions were: (1) Two copies of the survey form with instructions, one form to complete and submit and one for the institution's own files; (2) an envelope in which to return one completed form; (3) a postcard for acknowledgment of receipt of materials and the identity and correct address of the person completing the form; and, (4) a cover letter describing the survey. In addition, a telephone number of the NSF office and personnel handling the survey was included on the form. As a rule, information to complete this instrument is found within the institution's year-end accounting records.

Every effort is made to maintain close contact with respondents in order to preserve the consistency and continuity of the resultant data. The completed FY 1980 questionnaires were carefully examined upon receipt by NSF. A computerized facsimile of the survey form was then prepared for each institution, depicting a 3-year comparison of its responses, including the current year's data, and noting substantive disparities, if any. The facsimiles were mailed to all doctorate institutions and to all other institutions requiring corrections so that updating could be accomplished before the final processing and tabulation by the contractor.

the response rate

By the survey closeout date in late July 1981, a total of 514 completed forms was received from universities and/or colleges in the original universe of 563, or a 91-percent response rate; completed forms were received from all 19 of the FFRDC's. Table A-1 shows the distribution of university and college responses by degree level. Response rates for the bachelor's degree-granting institutions are included with totals from 2-year and other institutions that do not award a science degree. The highest response rate, 94 percent, was from doctorate-granting institutions where 98 percent of the R&D expenditures in S/E fields were disbursed.

Table A-1. R&D expenditures survey response rates by type of institution: FY 1980

Highest degree granted	Number surveyed	Number of respondents	Percent of total
Total	563	514	91.3
Doctorate	325	306	94.2
Master's	173	155	89.6
Bachelor's and no science degrees	65	53	81.5

Source: National Science Foundation

In order to provide national totals for academic R&D expenditures, it was necessary to develop estimates for the approximately 9 percent of the survey population that had not responded. This process, referred to as "imputation," has been used consistently since 1976. In this publication the letter "I" is used to identify imputed data and the letter "E" is used when respondent institutions indicated that their data were estimated or when data required slight adjustments to distribute evenly. The combined imputed and estimated amounts totalled $365 million for academic R&D expenditures, or 6 percent of the $6.05 billion universe total, as shown in table A-2.

Table A-2. R&D expenditures survey imputed and estimated amounts by type of institution: FY 1980

[Dollars in millions]

Highest degree granted	Separately budgeted R&D expenditures	Amount imputed and/or estimated	Percent of total
Total	$6,049	$365	6.0
Doctorate	5,952	331	5.6
Master's	75	26	34.7
Bachelor's and no science degrees	23	9	39.1

Source: National Science Foundation

Table A-3 presents imputed and estimated rates for nonresponse in the FY 1980 survey in the broad S/E disciplines. The amount imputed or estimated is displayed along with the percentage it represents of all institutional totals in a particular discipline. The highest imputation rates occur in psychology and the social sciences, 14 percent and 11 percent, respectively. The amounts imputed or estimated in the source of funds categories and the percentage of all institutional totals of those sources are shown in table A-4. As seen in this table, university respondents are best able to identify the source of R&D support on federally funded projects. The relatively low imputation rates in tables A-3 and A-4 are evidence of the acceptable quality of data reported and the care addressed by respondent institutions to participating in the survey.

For detailed studies of individual institutional responses, the reader should consider obtaining the FY 1980 data tapes by contacting NSF as indicated in the general notes or refer to tables in section B beginning with table B-14.

It should be evident that, as in all surveys, the quality of the data collected depends on the respondents' ability to provide it. If information is not complete

Table A-3. R&D expenditures survey imputed and estimated amounts by field: FY 1980

[Dollars in millions]

Science/engineering field	Separately budgeted R&D expenditures, FY 1980			Federally financed R&D expenditures, FY 1980		
	Total	Amount imputed and/or estimated	Percent of total	Federal	Amount imputed and/or estimated	Percent of total
Total	$6,049	$365	6.0%	$4,093	$145	3.5%
Engineering	863	58	6.8	595	31	5.2
Physical sciences	680	65	9.6	555	19	3.5
Environmental sciences	506	37	7.3	371	19	5.1
Mathematical and computer sciences	192	10	4.9	138	4	2.7
Life sciences	3,211	277	8.6	2,092	100	4.8
Psychology	111	16	14.2	81	11	13.0
Social sciences	341	38	11.1	182	11	6.0
Other sciences	146	11	7.4	78	4	5.5

Source: National Science Foundation

Table A-4. R&D expenditures survey imputed and estimated rates by source of funds: FY 1980

[Dollars in millions]

Source of funds	Separately budgeted R&D expenditures, FY 1980		
	Total	Amount imputed and/or estimated	Percent of total
Total	$6,049	$365	6.0%
Federal Government	4,093	145	3.5
State and local governments	492	36	7.4
Industry	236	18	7.5
Institutional funds	821	54	6.5
All other sources	408	46	11.2

Source: National Science Foundation

at the time of the survey, the respondent may find it necessary to provide only what is available. In that case, revision of earlier years' data is a strengthening action.

Institutions which are included in the R&D survey are given the opportunity to correct prior years' data when necessary. When updated or amended figures covering past years' records are submitted by a respondent, trend data are correspondingly changed by NSF. Similarly, if a respondent institution undergoes an organizational change, such as a merger, NSF incorporates such changes into prior-year data so as to preserve the comparability and consistency of the data series.

During the processing of the results of the FY 1980 survey, figures reflecting the merger of the Applied Physics Laboratory (APL) with Johns Hopkins University were received. In earlier years of this survey, APL was considered an FFRDC; the actual merger took place in 1978, but complete figures were not available until 1980. When they were received, the FY 1979 and the FY 1980 academic sector R&D expenditures totals were adjusted to reflect this merger, resulting in a significant impact on discipline data from Johns Hopkins University.

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(DOLLARS IN MILLIONS)

FISCAL YEAR	TOTAL	FEDERAL GOVERNMENT	STATE AND LOCAL GOVERNMENT	INDUSTRY	INSTITUTIONAL FUNDS	ALL OTHER SOURCES
1953	255	138	37	19	35	26
1954	290	160	42	22	38	28
1955	312	169	47	25	41	30
1956	372	213	53	29	43	34
1957	410	229	60	34	49	38
1958	456	254	68	39	53	42
1959	526	306	76	39	58	47
1960	646	405	85	40	64	52
1961	763	500	95	40	70	58
1962	904	613	106	40	79	66
1963	1,081	760	118	41	89	73
1964	1,275	917	132	40	103	83
1965	1,474	1,073	143	41	124	93
1966	1,715	1,261	156	42	148	108
1967	1,921	1,409	164	48	181	119
1968	2,149	1,572	172	55	218	132
1969	2,225	1,600	197	60	223	145
1970	2,335	1,647	219	61	243	165
1971	2,500	1,724	255	70	274	177
1972	2,630	1,795	269	74	305	187
1973	2,884	1,985	295	84	318	202
1974	3,023	2,032	307	96	370	218
1975	3,409	2,288	332	113	417	259
1976	3,727	2,512	363	123	445	284
1977	4,070	2,730	373	139	514	314
1978 1/	4,621	3,057	413	170	622	359
1979	5,354	3,594	469	195	725	373
1980	6,049	4,093	492	235	[illegible]	408

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-2. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY YEAR AND CHARACTER OF WORK: FISCAL YEARS 1953-90

(DOLLARS IN MILLIONS)

FISCAL YEAR	TOTAL	BASIC RESEARCH		APPLIED RESEARCH AND DEVELOPMENT	
		AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL
1953	255	110	43.1%	145	56.9%
1954	290	136	46.9	154	53.1
1955	312	159	51.0	153	49.0
1956	372	200	53.8	172	46.2
1957	410	240	58.5	170	41.5
1958	456	281	61.6	175	38.4
1959	526	343	65.2	183	34.8
1960	646	433	67.0	213	33.0
1961	763	536	70.2	227	29.8
1962	904	659	72.9	245	27.1
1963	1,081	814	75.3	267	24.7
1964	1,275	1,003	78.7	272	21.3
1965	1,474	1,138	77.2	336	22.8
1966	1,715	1,303	76.0	412	24.0
1967	1,921	1,457	75.8	464	24.2
1968	2,149	1,650	76.8	499	23.2
1969	2,225	1,711	76.9	514	23.1
1970	2,335	1,796	76.9	539	23.1
1971	2,500	1,914	76.6	586	23.4
1972	2,630	2,022	76.9	608	23.1
1973	2,884	2,053	71.2	831	28.8
1974	3,023	2,154	71.3	869	28.7
1975	3,409	2,410	70.7	999	29.3
1976	3,727	2,547	68.3	1,180	31.7
1977	4,070	2,802	68.8	1,268	31.2
1978 1/	4,621	-	-	-	-
1979	5,354	3,607	67.4	1,747	32.6
1980	6,049	4,019	66.4	2,030	33.6

1/ DATA WERE NOT COLLECTED IN 1978.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-3. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1970 AND 1972-80

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1970	1972	1973	1974	1975	1976	1977	1978 1/	1979	1980
TOTAL	2,334,859	2,630,442	2,883,958	3,022,642	3,408,616	3,727,232	4,069,847	4,521,291	5,354,438	6,049,325
SOURCE OF FUNDS:										
FEDERAL GOVERNMENT	1,647,500	1,795,045	1,985,386	2,032,204	2,288,070	2,511,603	2,729,755	3,057,153	3,594,386	4,092,559
STATE AND LOCAL GOVERNMENTS	219,777	269,582	294,572	306,881	331,612	363,017	373,213	413,589	468,976	492,310
INDUSTRY	60,538	74,413	83,968	95,953	112,952	123,134	138,788	169,605	192,745	235,511
INSTITUTIONAL FUNDS	243,051	304,789	318,289	369,689	417,391	444,972	513,559	521,971	725,063	820,940
ALL OTHER SOURCES	164,993	186,613	201,743	217,915	258,591	284,506	314,532	359,069	373,268	407,995
CHARACTER OF WORK: 2/										
BASIC RESEARCH	1,795,864	2,022,150	2,053,140	2,153,952	2,409,443	2,547,576	2,801,762	-	3,607,310	4,319,909
APPLIED RESEARCH AND DEVELOPMENT	538,995	608,292	830,818	868,690	999,173	1,179,656	1,268,085	-	1,747,128	2,030,515
FIELD:										
ENGINEERING 3/	313,836	341,362	333,129	346,905	380,912	431,727	498,473	501,052	767,799	362,600
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	-	-	-	-	-	48,799
CHEMICAL	-	-	-	-	-	-	-	-	-	64,474
CIVIL	-	-	-	-	-	-	-	-	-	86,602
ELECTRICAL	-	-	-	-	-	-	-	-	-	173,937
MECHANICAL	-	-	-	-	-	-	-	-	-	144,705
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	339,093
PHYSICAL SCIENCES	307,310	324,222	328,262	333,479	350,275	379,376	428,406	495,399	603,290	579,659
ASTRONOMY	18,597	21,596	24,114	24,427	26,607	26,294	32,361	36,782	39,060	52,309
CHEMISTRY	102,002	108,122	113,687	115,777	120,707	140,139	164,302	183,131	207,574	245,513
PHYSICS	161,921	159,067	167,013	169,250	173,510	183,050	201,655	235,099	300,798	329,151
OTHER, N.E.C.	24,790	35,437	23,448	24,025	29,451	29,893	30,088	41,387	55,758	52,898
ENVIRONMENTAL SCIENCES 3/	125,315	189,021	209,385	235,072	255,060	286,972	317,507	377,549	450,669	506,054
ATMOSPHERIC	-	-	-	-	-	-	-	-	-	83,077
EARTH SCIENCES	-	-	-	-	-	-	-	-	-	196,590
OCEANOGRAPHY	-	-	-	-	-	-	-	-	-	139,175
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	87,232
MATHEMATICAL/COMPUTER SCIENCES	72,413	69,322	72,741	76,709	85,306	86,994	107,868	125,178	176,012	191,940
MATHEMATICS 4/	-	-	37,084	37,507	39,713	42,491	52,305	59,756	78,424	78,409
COMPUTER SCIENCES 4/	-	-	35,657	39,202	45,593	44,503	55,563	67,422	97,588	113,532
LIFE SCIENCES	1,194,249	1,329,320	1,529,808	1,631,778	1,900,834	2,101,688	2,258,803	2,535,455	2,828,282	3,210,587
AGRICULTURAL SCIENCES 5/	-	227,079	276,870	347,514	383,841	412,867	460,647	497,562	576,436	648,591
BIOLOGICAL SCIENCES	547,193	443,473	556,676	510,210	630,163	710,717	772,287	858,882	965,876	1,082,578
MEDICAL SCIENCES	549,121	594,574	645,709	716,080	811,383	997,376	950,907	1,093,499	1,201,052	1,379,172
OTHER, N.E.C.	97,935	64,194	50,553	57,974	75,447	80,728	74,962	85,422	84,918	100,346
PSYCHOLOGY	59,250	69,188	73,742	74,236	80,322	77,883	85,129	89,664	100,389	111,019
SOCIAL SCIENCES	188,669	202,792	231,115	240,617	256,083	262,238	268,032	277,497	294,522	341,450
ECONOMICS	39,616	45,784	47,628	47,685	55,928	65,439	72,089	79,129	86,515	94,417
POLITICAL SCIENCE	19,273	21,396	25,504	27,017	29,381	28,352	32,314	36,571	40,066	49,161
SOCIOLOGY	44,383	58,451	61,514	63,447	68,749	66,239	61,922	66,900	73,529	88,361
OTHER, N.E.C.	66,397	77,161	96,469	102,468	102,025	102,208	101,707	94,897	94,512	109,511
OTHER SCIENCES, N.E.C.	88,817	105,215	105,776	83,846	99,824	100,454	105,629	115,478	133,375	145,907

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
2/ DATA WERE NOT COLLECTED IN 1979.
3/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
4/ NOT SEPARATELY AVAILABLE PRIOR TO 1973.
5/ NOT SEPARATELY AVAILABLE PRIOR TO 1972, INCLUDED IN BIOLOGICAL SCIENCES; ESTIMATED FOR 1972 AND 1973 BASED ON DATA COLLECTED IN 1974.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-4. -- R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1970 AND 1972-80

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1970	1972	1973	1974	1975	1976	1977	1978	1979	1980
TOTAL	2,286,192	2,568,573	2,809,160	2,948,761	3,334,230	3,654,035	3,990,779	4,536,533	5,264,661	5,952,023
SOURCE OF FUNDS:										
FEDERAL GOVERNMENT	1,515,275	1,754,798	1,938,225	1,985,318	2,237,153	2,464,217	2,681,092	3,003,291	3,533,236	4,029,218
STATE AND LOCAL GOVERNMENTS	214,197	261,026	282,281	294,922	325,175	355,722	364,839	405,543	460,437	483,052
INDUSTRY	58,479	73,006	81,783	93,781	110,098	120,076	135,012	165,494	189,292	230,932
INSTITUTIONAL FUNDS	237,588	297,906	310,595	362,495	409,327	436,015	502,214	609,951	712,934	807,552
ALL OTHER SOURCES	160,642	181,837	196,276	212,645	252,477	278,005	307,622	352,256	368,962	401,209
CHARACTER OF WORK: 1/										
BASIC RESEARCH	1,768,569	1,987,822	2,021,690	2,115,696	2,366,312	2,505,466	2,760,628	-	3,656,669	3,962,041
APPLIED RESEARCH AND DEVELOPMENT	517,613	580,751	787,470	833,065	967,918	1,148,569	1,230,153	-	1,707,992	1,989,982
FIELD:										
ENGINEERING 2/	311,487	335,111	328,206	343,969	377,107	425,182	490,931	591,952	760,616	856,551
AERONAUTICAL AND ASTRONAUTICAL	-3	-3	-3	-3	-3	-3	-3	-3	-3	48,279
CHEMICAL	-3	-3	-3	-3	-3	-3	-3	-3	-3	64,375
CIVIL	-3	-3	-3	-3	-3	-3	-3	-3	-3	84,697
ELECTRICAL	-3	-3	-3	-3	-3	-3	-3	-3	-3	178,513
MECHANICAL	-3	-3	-3	-3	-3	-3	-3	-3	-3	144,040
OTHER, N.E.C.	-3	-3	-3	-3	-3	-3	-3	-3	-3	336,597
PHYSICAL SCIENCES	297,767	314,056	315,751	322,181	338,441	366,491	415,591	481,445	586,664	662,373
ASTRONOMY	18,356	21,373	23,854	24,155	26,394	26,094	32,117	36,535	38,570	51,355
CHEMISTRY	97,303	103,794	108,060	110,587	114,935	133,607	157,403	175,436	200,145	236,513
PHYSICS	158,132	154,640	162,189	165,323	169,310	179,013	197,861	230,478	295,450	323,963
OTHER, N.E.C.	23,926	34,849	21,649	22,086	27,802	27,777	28,210	38,926	52,499	51,042
ENVIRONMENTAL SCIENCES 2/	121,634	183,943	203,016	227,989	246,766	277,844	307,392	365,491	441,387	492,361
ATMOSPHERIC	-3	-3	-3	-3	-3	-3	-3	-3	-3	80,852
EARTH SCIENCES	-3	-3	-3	-3	-3	-3	-3	-3	-3	190,872
OCEANOGRAPHY	-3	-3	-3	-3	-3	-3	-3	-3	-3	136,315
OTHER, N.E.C.	-3	-3	-3	-3	-3	-3	-3	-3	-3	84,302
MATHEMATICAL/COMPUTER SCIENCES	70,389	67,500	70,616	74,865	82,316	84,661	104,039	121,573	171,992	187,313
MATHEMATICS 3/	-3	-3	35,587	36,486	37,916	41,330	51,043	57,340	77,049	76,521
COMPUTER SCIENCES 3/	-3	-3	35,029	38,379	44,400	43,331	52,996	64,333	94,943	110,792
LIFE SCIENCES	1,181,772	1,308,592	1,506,802	1,606,002	1,881,479	2,081,626	2,234,746	2,513,592	2,798,050	3,178,553
AGRICULTURAL SCIENCES 4/	-3	225,299	274,732	335,840	377,260	406,359	453,787	490,326	565,745	636,974
BIOLOGICAL SCIENCES	537,253	435,296	547,007	500,392	619,714	700,133	758,926	843,985	950,498	1,067,902
MEDICAL SCIENCES	547,083	584,676	635,919	713,870	809,723	895,718	947,629	1,093,439	1,198,333	1,375,583
OTHER, N.E.C.	97,436	63,321	49,144	55,900	74,782	79,416	74,404	85,779	83,474	98,094
PSYCHOLOGY	56,283	65,932	70,065	70,142	74,380	74,516	82,195	85,550	93,799	106,358
SOCIAL SCIENCES	161,627	191,538	213,118	223,081	238,712	247,436	254,694	264,279	282,560	323,304
ECONOMICS	37,707	44,659	45,772	46,141	54,008	64,346	70,790	77,667	84,205	91,493
POLITICAL SCIENCE	18,362	20,575	24,311	26,315	28,108	27,084	31,144	35,230	38,917	47,232
SOCIOLOGY	43,157	52,315	52,513	55,583	62,004	62,624	59,339	64,073	70,921	83,041
OTHER, N.E.C.	62,399	73,989	90,522	95,042	94,592	93,382	93,421	87,253	88,617	102,238
OTHER SCIENCES, N.E.C.	85,226	101,301	101,586	80,532	95,029	96,179	101,191	111,549	129,493	143,530

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
3/ NOT SEPARATELY AVAILABLE FOR [illegible] 1973).
4/ NOT SEPARATELY AVAILABLE PRIOR TO 1972, INCLUDED IN BIOLOGICAL SCIENCES; ESTIMATED FOR 1972 AND 1973 BASED ON DATA COLLECTED IN 1974.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-5. -- R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS, BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1979 AND 1980

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1979	1980	PERCENT CHANGE 1979-80	1979	1980	PERCENT CHANGE 1979-80	1979	1980	PERCENT CHANGE 1979-80
TOTAL	5,264,661	5,952,023	13.1	3,301,347	3,759,170	13.9	1,963,314	2,192,853	11.7
SOURCE OF FUNDS:									
FEDERAL GOVERNMENT	3,533,236	4,029,248	14.0	1,995,933	2,300,254	15.2	1,537,303	1,728,994	12.5
STATE AND LOCAL GOVERNMENTS	460,437	483,052	4.9	413,880	439,915	6.3	46,557	43,137	-7.3
INDUSTRY	189,292	230,992	22.0	110,265	139,302	26.3	79,027	91,690	16.0
INSTITUTIONAL FUNDS	712,834	807,552	13.3	571,862	648,532	13.4	140,972	159,020	12.8
ALL OTHER SOURCES	368,862	401,209	8.8	209,407	231,167	10.4	159,455	170,042	6.6
CHARACTER OF WORK:									
BASIC RESEARCH	3,556,669	3,962,041	11.4	2,069,124	2,325,301	12.4	1,487,545	1,636,740	10.0
APPLIED RESEARCH AND DEVELOPMENT	1,707,992	1,989,982	16.5	1,232,223	1,433,869	16.4	475,769	556,113	16.9
FIELD:									
ENGINEERING 1/	760,616	856,501	12.6	442,640	501,092	13.2	317,976	355,409	11.8
AERONAUTICAL AND ASTRONAUTICAL	-1	48,279	-	-1	23,120	-	-1	25,159	-
CHEMICAL	-1	64,275	-	-1	37,127	-	-1	27,248	-
CIVIL	-1	84,607	-	-1	56,488	-	-1	28,209	-
ELECTRICAL	-1	178,513	-	-1	90,452	-	-1	88,061	-
MECHANICAL	-1	144,040	-	-1	68,748	-	-1	75,292	-
OTHER, N.E.C.	-1	336,597	-	-1	225,157	-	-1	111,490	-
PHYSICAL SCIENCES	586,664	662,873	13.0	312,527	365,992	17.1	274,137	296,981	8.3
ASTRONOMY	38,570	51,245	33.1	27,955	37,367	33.7	10,615	13,988	31.8
CHEMISTRY	200,145	236,513	18.2	124,343	146,866	18.1	75,802	89,647	18.3
PHYSICS	295,450	323,963	9.7	134,744	157,473	16.9	160,705	166,490	3.6
OTHER, N.E.C.	52,499	51,042	-2.8	25,485	24,186	-5.1	27,014	26,856	-.6
ENVIRONMENTAL SCIENCES 1/	441,387	492,841	11.7	319,433	352,097	10.2	121,954	140,744	15.4
ATMOSPHERIC	-1	80,842	-	-1	71,207	-	-1	9,645	-
EARTH SCIENCES	-1	190,872	-	-1	140,093	-	-1	50,779	-
OCEANOGRAPHY	-1	136,815	-	-1	101,409	-	-1	35,406	-
OTHER, N.E.C.	-1	84,302	-	-1	39,388	-	-1	44,914	-
MATHEMATICAL/COMPUTER SCIENCES	171,992	187,313	8.9	76,290	78,367	2.7	95,702	108,946	13.8
MATHEMATICS	77,049	76,521	-.7	39,131	34,981	-10.6	37,918	41,540	9.5
COMPUTER SCIENCES	94,943	110,792	16.7	37,159	43,386	16.8	57,784	67,406	16.7
LIFE SCIENCES	2,798,050	3,178,553	13.6	1,795,048	2,062,942	14.9	1,003,002	1,115,711	11.2
AGRICULTURAL SCIENCES	565,745	636,974	12.6	548,026	617,367	12.7	17,719	19,607	10.7
BIOLOGICAL SCIENCES	950,498	1,067,902	12.4	562,492	639,636	13.7	388,006	428,266	10.4
MEDICAL SCIENCES	1,198,333	1,375,583	14.8	640,937	755,498	17.9	557,396	620,085	11.2
OTHER, N.E.C.	83,474	98,094	17.5	43,593	50,341	15.5	39,881	47,753	19.7
PSYCHOLOGY	93,799	106,558	13.6	60,311	68,610	13.8	33,488	37,948	13.3
SOCIAL SCIENCES	282,660	323,804	14.6	196,946	221,984	12.7	85,714	101,820	18.8
ECONOMICS	84,205	91,493	8.7	61,040	66,869	9.5	23,165	24,624	6.3
POLITICAL SCIENCE	38,917	47,032	20.9	25,969	28,948	11.5	12,948	18,184	40.4
SOCIOLOGY	70,921	83,041	17.1	53,718	62,076	15.6	17,203	20,965	21.9
OTHER, N.E.C.	88,617	102,238	15.4	56,219	64,191	14.2	32,398	38,047	17.4
OTHER SCIENCES, N.E.C.	129,493	143,580	10.9	98,152	108,286	10.3	31,341	35,294	12.6

1/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-6. -- FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1970 AND 1972-80

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1970	1972	1973	1974	1975	1976	1977	1978 1/	1979	1980
TOTAL	1,647,500	1,795,045	1,985,386	2,032,204	2,288,070	2,511,603	2,729,755	3,057,159	3,594,386	4,092,569
CHARACTER OF WORK: 2/										
BASIC RESEARCH	1,296,120	1,420,164	1,453,916	1,523,115	1,695,022	1,841,043	2,009,214	-	2,570,918	2,849,725
APPLIED RESEARCH AND DEVELOPMENT	351,380	374,881	531,470	509,089	593,048	670,560	720,541	-	1,023,468	1,242,844
FIELD:										
ENGINEERING 3/	245,838	252,876	238,139	239,346	259,353	290,518	336,725	407,497	526,366	594,547
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	-	-	-	-	-	37,596
CHEMICAL	-	-	-	-	-	-	-	-	-	44,938
CIVIL	-	-	-	-	-	-	-	-	-	59,105
ELECTRICAL	-	-	-	-	-	-	-	-	-	133,797
MECHANICAL	-	-	-	-	-	-	-	-	-	97,830
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	221,281
PHYSICAL SCIENCES	257,822	261,010	268,368	270,211	284,992	305,407	342,769	392,346	491,140	555,332
ASTRONOMY	15,516	16,452	17,697	17,101	19,522	18,351	23,230	26,349	26,901	37,697
CHEMISTRY	79,942	82,564	86,560	88,703	92,716	107,867	125,440	133,011	156,950	189,349
PHYSICS	144,306	136,296	145,425	146,525	149,862	156,102	171,910	199,161	261,365	286,867
OTHER, N.E.C.	19,058	25,698	18,686	17,882	22,892	23,087	22,189	33,835	45,924	41,419
ENVIRONMENTAL SCIENCES 3/	88,127	138,719	157,556	168,495	180,643	211,560	238,240	274,794	328,791	371,414
ATMOSPHERIC	-	-	-	-	-	-	-	-	-	70,693
EARTH SCIENCES	-	-	-	-	-	-	-	-	-	139,084
OCEANOGRAPHY	-	-	-	-	-	-	-	-	-	104,485
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	57,152
MATHEMATICAL/COMPUTER SCIENCES	54,338	51,938	53,685	58,107	65,099	65,807	78,178	85,344	129,662	137,997
MATHEMATICS 4/	-	-	28,756	29,396	31,224	32,982	40,632	44,230	60,470	61,080
COMPUTER SCIENCES 5/	-	-	24,929	28,711	33,875	32,925	37,546	41,214	69,192	76,917
LIFE SCIENCES	914,417	863,709	1,014,585	1,052,808	1,237,878	1,380,844	1,473,983	1,625,125	1,817,734	2,391,836
AGRICULTURAL SCIENCES 5/	-	78,313	94,373	101,417	112,864	122,538	132,772	145,070	173,005	197,321
BIOLOGICAL SCIENCES	334,851	311,993	398,628	365,701	457,093	522,170	575,128	627,151	704,341	804,331
MEDICAL SCIENCES	431,656	438,093	486,045	543,663	613,716	677,509	712,327	791,067	879,925	1,320,809
OTHER, N.E.C.	47,910	34,706	35,539	42,027	54,205	58,627	53,756	61,835	60,463	69,875
PSYCHOLOGY	47,263	53,555	58,600	58,547	61,686	59,367	63,616	63,998	72,257	81,036
SOCIAL SCIENCES	94,655	111,215	132,420	136,824	141,333	138,255	138,205	140,445	155,099	182,097
ECONOMICS	17,698	20,440	22,683	22,217	26,968	29,132	31,595	37,103	40,728	44,484
POLITICAL SCIENCE	7,923	8,387	10,363	11,894	12,280	11,966	14,926	15,888	18,452	21,127
SOCIOLOGY	26,220	34,842	40,489	41,276	45,041	41,115	37,454	40,597	46,739	57,374
OTHER, N.E.C.	42,827	47,546	58,894	61,437	57,044	56,042	53,830	46,857	49,180	59,112
OTHER SCIENCES, N.E.C.	44,990	62,623	62,038	47,866	57,086	59,945	58,007	67,623	73,337	78,310

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
2/ DATA WERE NOT COLLECTED IN 1978.
3/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
4/ NOT SEPARATELY AVAILABLE PRIOR TO 1973.
5/ NOT SEPARATELY AVAILABLE PRIOR TO 1972, INCLUDED IN BIOLOGICAL SCIENCES; ESTIMATED FOR 1972 AND 1973 BASED ON DATA COLLECTED IN 1974.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-7. -- FEDERALLY FINANCED R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS, BY CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1979 AND 1980

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1979	1980	PERCENT CHANGE 1979-80	1979	1980	PERCENT CHANGE 1979-80	1979	1980	PERCENT CHANGE 1979-80
TOTAL	3,533,236	4,029,218	14.0	1,995,933	2,300,254	15.2	1,537,303	1,728,964	12.5
CHARACTER OF WORK:									
BASIC RESEARCH	2,533,051	2,810,220	10.9	1,338,939	1,524,786	13.9	1,194,112	1,285,434	7.7
APPLIED RESEARCH AND DEVELOPMENT	1,000,185	1,218,798	21.9	656,994	775,468	18.0	343,191	443,330	29.2
FIELD:									
ENGINEERING 1/	520,978	589,809	13.2	266,388	305,178	14.6	254,590	284,631	11.8
AERONAUTICAL AND ASTRONAUTICAL	-	37,093	-	-	16,741	-	-	20,352	-
CHEMICAL	-	44,905	-	-	22,504	-	-	22,401	-
CIVIL	-	57,505	-	-	34,941	-	-	22,724	-
ELECTRICAL	-	133,514	-	-	59,433	-	-	74,141	-
MECHANICAL	-	97,310	-	-	42,653	-	-	54,707	-
OTHER, N.E.C.	-	219,332	-	-	129,006	-	-	90,326	-
PHYSICAL SCIENCES	479,146	544,338	13.6	239,011	282,342	18.1	240,135	261,996	9.1
ASTRONOMY	26,421	37,131	40.5	18,734	27,438	46.5	7,687	9,693	26.1
CHEMISTRY	152,320	183,708	20.6	90,727	110,296	21.6	61,593	73,412	19.2
PHYSICS	256,845	282,805	10.1	110,922	129,013	16.3	145,923	153,792	5.4
OTHER, N.E.C.	43,560	40,694	-6.6	18,628	15,595	-16.3	24,932	25,099	.7
ENVIRONMENTAL SCIENCES 1/	322,226	361,860	12.3	217,038	243,307	12.1	105,188	118,553	12.7
ATMOSPHERIC	-	68,586	-	-	60,858	-	-	7,728	-
EARTH SCIENCES	-	134,964	-	-	90,225	-	-	44,739	-
OCEANOGRAPHY	-	103,028	-	-	74,169	-	-	28,859	-
OTHER, N.E.C.	-	55,282	-	-	18,055	-	-	37,227	-
MATHEMATICAL/COMPUTER SCIENCES	128,131	136,279	6.4	44,605	41,784	-6.3	83,525	94,495	13.1
MATHEMATICS	59,685	59,991	.5	26,673	23,973	-10.1	33,012	36,018	9.1
COMPUTER SCIENCES	68,446	76,288	11.5	17,932	17,811	-.7	50,514	58,477	15.8
LIFE SCIENCES	1,795,692	2,067,512	15.1	1,040,340	1,211,735	16.5	755,352	855,777	13.3
AGRICULTURAL SCIENCES	164,531	187,642	14.0	159,895	182,213	14.0	4,636	5,429	17.1
BIOLOGICAL SCIENCES	693,007	793,599	14.5	393,619	455,831	15.8	299,388	337,768	12.8
MEDICAL SCIENCES	878,844	1,019,093	16.0	457,838	541,628	18.3	421,006	477,465	13.4
OTHER, N.E.C.	59,310	67,178	13.3	28,988	32,063	10.6	30,322	35,115	15.8
PSYCHOLOGY	66,684	77,743	16.6	41,822	49,748	19.0	24,862	27,995	12.6
SOCIAL SCIENCES	148,942	174,850	17.4	95,572	110,492	15.6	53,370	64,358	20.6
ECONOMICS	39,274	43,228	10.1	25,467	28,611	12.3	13,807	14,617	5.9
POLITICAL SCIENCE	18,060	20,544	13.8	11,025	11,274	2.3	7,035	9,270	31.8
SOCIOLOGY	45,491	54,403	19.6	32,446	37,832	16.6	13,045	16,571	27.0
OTHER, N.E.C.	46,117	56,675	22.9	26,634	32,775	23.1	19,483	23,900	22.7
OTHER SCIENCES, N.E.C.	71,437	76,827	7.5	51,157	55,668	8.8	20,280	21,159	4.3

1/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-9. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY GEOGRAPHIC DISTRIBUTION: FISCAL YEARS 1970 AND 1972-80

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	1970	1972	1973	1974	1975	1976	1977	1978 1/	1979	1980
TOTAL, ALL INSTITUTIONS	2,334,859	2,630,442	2,883,958	3,022,642	3,408,616	3,727,232	4,069,847	4,536,539	5,354,438	6,049,325
NEW ENGLAND	285,058	280,755	279,361	292,585	329,736	361,316	403,153	452,420	525,155	590,176
CONNECTICUT	51,247	54,010	53,586	54,482	62,673	71,595	79,348	89,078	105,428	118,199
MAINE	3,371	5,985	6,688	7,115	8,759	9,632	9,937	11,022	12,593	14,902
MASSACHUSETTS	204,010	188,985	189,172	202,277	221,922	239,793	265,490	298,231	344,984	386,509
NEW HAMPSHIRE	9,004	7,659	8,774	[illegible]273	10,063	11,963	13,705	16,332	17,890	19,690
RHODE ISLAND	12,424	17,647	13,869	[illegible]565	15,730	16,166	21,543	24,121	30,229	34,997
VERMONT	5,002	6,469	7,272	[illegible]873	10,589	12,167	13,130	13,535	14,031	15,980
MIDDLE ATLANTIC	448,778	485,200	530,807	549,495	608,774	650,778	704,531	790,382	872,943	979,405
NEW JERSEY	44,538	46,475	49,201	54,453	55,805	54,321	59,040	68,387	76,955	85,500
NEW YORK	274,114	309,110	348,891	344,506	389,842	409,314	443,450	482,103	546,551	613,629
PENNSYLVANIA	130,133	129,615	132,715	150,536	163,127	187,143	202,041	239,892	249,437	280,275
EAST NORTH CENTRAL	384,784	426,537	475,258	489,617	546,205	586,629	628,625	712,020	815,277	904,916
ILLINOIS	103,927	123,525	133,321	142,145	150,071	162,512	174,328	198,715	218,253	238,817
INDIANA	45,868	51,160	54,881	57,676	63,947	69,516	69,570	79,555	89,676	101,532
MICHIGAN	96,531	97,837	112,375	108,057	127,939	137,823	146,973	171,295	200,295	217,297
OHIO	71,965	72,734	77,156	82,153	93,963	108,391	121,230	136,991	162,108	183,369
WISCONSIN	76,493	83,281	97,525	99,596	110,285	109,387	116,524	125,463	144,945	163,901
WEST NORTH CENTRAL	193,235	219,686	219,641	236,760	263,966	292,440	321,789	354,446	397,979	442,729
IOWA	28,219	30,690	36,361	40,026	47,069	52,374	60,830	67,277	77,602	88,921
KANSAS	28,062	28,043	31,310	33,231	30,687	34,334	36,939	38,109	43,215	49,474
MINNESOTA	40,393	49,758	54,577	61,185	70,256	75,536	83,038	94,706	106,547	119,471
MISSOURI	64,091	78,493	60,555	67,391	74,226	81,309	88,176	96,747	104,831	113,375
NEBRASKA	18,253	19,830	18,316	20,687	24,882	28,305	30,820	34,706	40,746	42,893
NORTH DAKOTA	4,463	5,884	6,701	7,506	10,111	12,790	13,526	14,379	15,424	17,963
SOUTH DAKOTA	9,754	6,978	6,821	6,734	6,735	7,792	8,410	8,789	9,614	10,732
SOUTH ATLANTIC	294,544	322,363	362,072	389,497	448,[illegible]27	489,6[illegible]	534,207	575,029	834,[illegible]27	938,066
DELAWARE	4,791	4,984	5,197	6,194	6,982	7,520	9,925	11,575	14,363	16,746
DISTRICT OF COLUMBIA	24,828	25,585	29,489	31,393	35,028	37,248	41,147	45,505	49,070	57,031
FLORIDA	55,797	65,458	73,428	76,742	87,590	98,401	105,002	107,629	120,447	140,151
GEORGIA	44,505	49,596	51,755	59,661	68,626	77,691	84,106	100,303	119,855	136,551
MARYLAND	52,803	63,392	70,843	79,045	89,935	93,583	202,599	110,954	287,648	315,186
NORTH CAROLINA	59,266	64,119	78,262	76,075	[illegible]188	92,330	99,380	101,864	122,674	133,628
SOUTH CAROLINA	8,809	9,792	11,113	13,401	18,316	19,939	21,813	23,452	30,490	34,346
VIRGINIA	25,410	30,470	34,975	39,548	44,825	51,012	58,551	62,765	74,453	86,706
WEST VIRGINIA	8,335	8,957	7,014	6,937	7,527	11,901	11,684	11,375	15,457	17,621
EAST SOUTH CENTRAL	79,924	82,214	97,699	105,014	123,385	130,620	141,414	158,969	187,391	201,671
ALABAMA	19,221	22,116	27,005	31,066	37,918	37,870	42,340	45,734	55,913	60,534
KENTUCKY	14,245	14,236	16,667	17,334	21,414	22,938	27,620	33,143	37,994	38,512
MISSISSIPPI	15,310	16,646	19,023	21,999	23,909	26,195	25,445	29,563	3[illegible]119	40,302
TENNESSEE	31,148	29,216	35,004	34,615	40,144	43,817	46,009	50,528	5[illegible]355	[illegible]323
WEST SOUTH CENTRAL	164,581	179,837	203,085	219,294	251,131	288,372	320,340	375,359	441,680	504,210
ARKANSAS	8,916	11,414	10,241	11,208	13,817	16,000	16,789	20,605	28,247	30,293
LOUISIANA	35,180	30,267	35,140	35,665	35,218	43,053	45,279	57,230	63,354	74,152
OKLAHOMA	17,824	19,247	20,078	19,106	21,513	23,156	26,289	30,579	35,081	48,167
TEXAS	102,661	118,909	137,676	153,315	176,583	206,163	231,983	266,945	314,998	351,608
MOUNTAIN	134,585	162,871	178,576	186,367	196,941	221,211	247,972	277,067	334,962	382,314
ARIZONA	16,773	23,911	30,321	31,164	33,539	37,198	41,827	49,305	67,125	77,163
COLORADO	51,267	59,399	63,997	62,585	65,897	73,308	77,519	86,332	104,554	123,003
IDAHO	6,543	8,084	8,727	10,600	11,877	13,704	15,215	13,442	13,985	14,434
MONTANA	8,553	6,756	9,771	9,614	10,831	13,254	14,168	15,548	17,993	18,309
NEVADA	5,539	6,085	6,449	7,537	7,824	9,404	9,043	10,500	12,616	13,933
NEW MEXICO	19,846	20,971	16,629	18,075	21,745	24,437	29,386	38,501	51,614	58,330
UTAH	20,142	32,005	36,004	39,635	37,500	40,789	49,742	52,279	57,297	65,798
WYOMING	6,222	5,660	6,678	7,157	7,728	9,117	11,072	10,160	9,758	11,049
PACIFIC	350,023	457,944	523,898	541,387	627,145	691,829	752,459	825,465	926,323	[illegible],085,111
ALASKA	9,192	15,524	16,560	19,111	21,139	28,748	35,175	39,367	36,947	42,154
CALIFORNIA	244,720	323,834	380,220	391,995	458,436	500,756	537,838	585,322	662,485	734,051
HAWAII	18,014	23,520	24,846	21,143	24,596	28,049	28,900	31,971	35,703	40,593
OREGON	30,676	32,204	34,768	36,557	39,699	47,081	51,530	56,129	62,884	72,307
WASHINGTON	47,421	62,862	69,504	72,581	83,275	87,195	99,016	112,177	128,304	146,006
OUTLYING AREAS	9,047	11,035	11,561	12,626	13,316	14,212	15,357	15,384	18,271	21,027

1/ DATA WERE COLLECTED ONLY FROM DOCTORATE-GRANTING INSTITUTIONS.
SOURCE: NATIONAL SCIENCE FOUNDATION

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TABLE B-9. -- FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION: FISCAL YEARS 1970 AND 1972-80

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	1970	1972	1973	1974	1975	1976	1977	1978 1/	1979	1980
TOTAL, ALL INSTITUTIONS	1,547,500	1,795,045	1,985,386	2,032,204	2,288,070	2,511,603	2,729,755	3,003,295	3,594,386	4,092,559
NEW ENGLAND	235,027	215,175	226,123	230,857	256,055	281,722	312,537	358,011	414,806	457,355
CONNECTICUT	39,578	38,345	38,913	40,203	45,530	53,790	58,917	68,863	80,466	92,553
MAINE	1,567	3,206	4,423	4,571	4,046	4,090	4,171	5,392	6,569	6,320
MASSACHUSETTS	173,829	149,369	158,286	163,070	177,892	191,615	210,723	240,439	279,354	313,381
NEW HAMPSHIRE	7,493	6,648	7,347	5,858	7,699	9,038	9,547	11,431	13,085	14,540
RHODE ISLAND	8,699	12,852	12,345	11,976	13,608	14,173	19,361	21,731	25,133	29,222
VERMONT	3,861	4,755	4,809	5,179	7,280	9,036	9,818	10,155	10,204	11,540
MIDDLE ATLANTIC	323,441	336,347	366,996	375,558	417,040	452,972	484,197	538,385	590,053	657,755
NEW JERSEY	31,311	27,250	29,567	28,821	32,375	32,553	34,847	40,346	44,632	51,243
NEW YORK	202,582	220,318	244,365	245,002	275,659	294,065	315,084	334,141	372,476	419,557
PENNSYLVANIA	89,543	88,779	93,064	101,735	109,006	126,354	134,266	153,399	172,995	186,955
EAST NORTH CENTRAL	265,824	278,674	315,281	315,137	345,137	377,499	403,569	446,351	511,377	535,505
ILLINOIS	77,253	83,693	97,765	100,843	106,551	116,558	127,336	134,852	147,559	158,204
INDIANA	33,375	35,042	39,824	40,329	43,916	45,800	47,353	55,072	60,462	68,461
MICHIGAN	65,013	67,276	71,087	67,850	78,622	78,115	84,453	99,129	112,110	127,917
OHIO	50,310	49,890	54,828	52,969	60,597	68,179	73,119	80,770	102,198	118,544
WISCONSIN	39,871	42,773	51,777	53,146	55,451	68,847	71,308	77,518	88,938	102,280
WEST NORTH CENTRAL	118,856	123,398	126,730	134,091	148,034	160,279	176,329	187,314	208,978	245,375
IOWA	17,166	17,727	20,407	21,768	25,139	26,769	31,334	34,217	40,960	50,597
KANSAS	18,053	17,433	20,050	20,542	16,762	17,330	18,998	15,497	17,371	15,737
MINNESOTA	27,843	28,504	31,395	35,463	42,065	45,238	48,628	53,265	61,398	68,690
MISSOURI	43,682	46,961	41,947	42,597	47,876	52,097	56,434	60,545	64,292	71,010
NEBRASKA	6,625	7,144	7,380	7,610	8,904	10,853	11,905	14,537	14,435	17,499
NORTH DAKOTA	1,839	2,121	2,541	3,108	4,373	4,771	5,722	5,565	6,307	6,889
SOUTH DAKOTA	3,643	3,509	3,010	3,003	2,915	3,201	3,308	3,935	4,215	4,563
SOUTH ATLANTIC	190,141	208,886	234,590	243,853	284,986	316,978	339,866	365,131	597,666	657,655
DELAWARE	2,914	3,158	3,078	3,177	3,652	4,348	5,544	6,787	8,117	9,190
DISTRICT OF COLUMBIA	20,629	21,600	23,755	24,630	26,284	28,695	30,442	35,282	36,078	40,390
FLORIDA	28,624	37,131	41,600	42,370	48,162	56,008	55,836	59,542	71,927	73,339
GEORGIA	25,231	22,983	24,979	24,977	33,072	38,403	43,297	50,587	62,786	71,572
MARYLAND	42,044	47,800	54,959	61,228	69,483	73,666	78,490	86,035	260,412	232,936
NORTH CAROLINA	42,403	46,847	55,079	53,246	62,896	65,335	69,284	56,331	82,010	94,046
SOUTH CAROLINA	4,631	4,763	4,922	6,294	7,773	8,958	11,084	10,898	15,655	18,123
VIRGINIA	17,832	18,260	21,333	23,594	28,106	33,742	39,437	42,388	51,833	58,713
WEST VIRGINIA	5,823	6,344	6,884	4,337	5,558	7,833	6,452	6,483	9,948	9,307
EAST SOUTH CENTRAL	55,644	53,670	65,853	67,865	78,236	80,612	84,353	95,084	103,299	114,389
ALABAMA	13,385	15,136	19,655	21,967	26,695	26,515	27,965	30,375	34,121	39,116
KENTUCKY	9,996	8,192	9,045	8,924	11,488	11,059	11,832	19,547	16,782	17,944
MISSISSIPPI	9,144	7,766	9,029	9,370	9,533	10,391	10,715	10,721	12,949	15,737
TENNESSEE	23,119	22,576	28,124	27,604	30,520	32,657	33,845	34,340	39,537	42,092
WEST SOUTH CENTRAL	96,446	103,697	112,489	120,792	141,949	161,721	183,996	203,305	240,433	277,501
ARKANSAS	4,609	5,191	4,825	4,346	5,281	6,639	7,807	7,939	7,577	9,328
LOUISIANA	21,249	13,863	14,448	15,820	17,156	18,603	19,460	19,329	24,055	29,301
OKLAHOMA	8,747	10,375	11,186	9,765	11,081	12,952	14,434	14,334	14,778	24,005
TEXAS	61,842	73,568	82,030	90,861	108,431	123,527	142,295	151,254	193,923	215,167
MOUNTAIN	96,822	115,474	122,406	123,333	135,956	150,355	165,150	183,660	219,328	258,294
ARIZONA	9,534	11,949	15,818	16,038	17,353	20,461	23,017	26,203	36,255	41,375
COLORADO	41,027	48,081	50,161	47,253	52,149	56,051	57,891	65,043	76,337	92,540
IDAHO	2,801	3,697	3,868	4,805	5,005	5,834	6,560	5,898	6,554	6,942
MONTANA	4,656	3,058	4,127	4,289	5,059	7,046	7,593	7,329	8,268	9,657
NEVADA	2,860	3,310	3,560	3,047	2,870	2,851	4,207	4,227	5,584	6,554
NEW MEXICO	16,885	18,275	12,919	14,779	18,095	20,218	22,942	29,753	37,842	46,494
UTAH	15,656	23,594	27,422	28,496	30,356	31,937	35,690	38,542	42,590	47,928
WYOMING	3,403	3,510	4,531	4,626	5,069	5,957	7,250	6,155	5,798	6,233
PACIFIC	260,784	355,127	410,426	415,761	475,086	522,873	572,487	617,254	698,516	836,379
ALASKA	5,938	11,204	11,822	10,718	12,047	18,429	24,664	26,591	25,431	26,597
CALIFORNIA	199,464	263,314	306,894	311,789	360,624	396,007	424,321	451,132	515,369	632,735
HAWAII	10,413	13,725	15,382	14,065	15,540	17,578	17,945	19,731	22,500	25,833
OREGON	21,789	21,832	24,007	25,458	27,090	30,930	32,890	34,975	39,311	45,099
WASHINGTON	33,180	45,052	52,321	53,731	59,785	59,929	72,667	84,775	96,005	106,123
OUTLYING AREAS	4,515	4,297	4,492	4,957	5,591	6,592	7,271	7,238	9,830	11,269

1/ DATA WERE COLLECTED ONLY FROM DOCTORATE-GRANTING INSTITUTIONS.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-10. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND SOURCE OF FUNDS: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FEDERAL GOVERNMENT	STATE AND LOCAL GOVERNMENT	INDUSTRY	INSTITUTIONAL FUNDS	ALL OTHER SOURCES
TOTAL, ALL INSTITUTIONS	6,049,325	4,092,569	492,310	235,511	820,940	407,995
NEW ENGLAND	590,176	447,956	15,196	22,495	42,439	42,100
CONNECTICUT	118,198	92,553	3,028	1,632	16,243	4,742
MAINE	14,902	6,020	2,756	462	5,379	285
MASSACHUSETTS	386,509	313,981	3,868	18,756	14,661	35,343
NEW HAMPSHIRE	17,550	14,640	1,182	194	2,459	1,225
RHODE ISLAND	34,397	29,222	3,135	650	1,890	0
VERMONT	15,780	11,640	1,227	901	1,807	505
MIDDLE ATLANTIC	979,405	687,798	39,959	44,195	134,624	92,872
NEW JERSEY	85,500	51,243	8,009	3,109	17,405	5,736
NEW YORK	613,629	419,659	27,797	23,230	79,463	63,480
PENNSYLVANIA	280,276	196,856	4,152	17,856	37,756	23,656
EAST NORTH CENTRAL	904,915	585,506	80,985	40,108	139,815	58,502
ILLINOIS	239,817	168,204	10,385	7,705	41,193	11,330
INDIANA	101,532	68,461	8,541	6,399	14,392	3,739
MICHIGAN	217,297	127,917	19,140	13,266	45,529	11,445
OHIO	183,369	118,644	15,081	8,700	18,735	22,209
WISCONSIN	163,901	102,280	27,838	4,038	19,966	9,779
WEST NORTH CENTRAL	442,729	245,375	59,745	14,737	95,633	27,246
IOWA	88,821	50,687	14,100	2,970	17,835	3,229
KANSAS	49,476	25,737	13,632	1,717	6,177	2,211
MINNESOTA	119,471	68,690	12,847	4,416	24,263	9,255
MISSOURI	113,375	71,010	9,608	1,855	20,749	10,153
NEBRASKA	42,893	17,499	1,062	1,963	20,844	1,525
NORTH DAKOTA	17,963	6,889	7,995	1,437	1,395	247
SOUTH DAKOTA	10,732	4,863	501	372	4,370	626
SOUTH ATLANTIC	938,066	657,655	79,950	32,608	121,938	45,915
DELAWARE	16,746	9,180	467	702	5,419	978
DISTRICT OF COLUMBIA	57,031	40,390	257	2,271	7,827	6,286
FLORIDA	140,151	73,338	10,519	5,832	36,166	14,296
GEORGIA	136,651	71,572	3,570	9,455	50,485	1,569
MARYLAND	315,186	282,986	11,696	2,377	7,363	10,764
NORTH CAROLINA	133,628	94,046	23,739	4,192	5,933	5,718
SOUTH CAROLINA	34,345	18,123	9,172	1,527	2,732	2,792
VIRGINIA	86,706	58,713	13,925	5,725	5,744	2,599
WEST VIRGINIA	17,621	9,307	6,605	527	269	913
EAST SOUTH CENTRAL	201,671	114,689	34,422	8,633	34,787	9,140
ALABAMA	60,534	29,116	7,802	2,310	6,958	4,348
KENTUCKY	38,512	17,944	6,776	753	12,709	330
MISSISSIPPI	40,302	15,737	12,051	885	9,562	2,067
TENNESSEE	62,323	42,092	7,813	4,685	5,556	2,375
WEST SOUTH CENTRAL	504,210	277,501	69,849	23,544	94,394	38,922
ARKANSAS	30,283	9,328	1,946	1,578	16,815	616
LOUISIANA	74,152	29,001	22,473	2,726	14,656	5,296
OKLAHOMA	48,167	21,005	3,322	3,710	15,476	654
TEXAS	351,608	215,167	42,108	15,530	48,447	32,356
MOUNTAIN	382,014	258,284	44,180	25,994	35,127	18,429
ARIZONA	77,163	41,876	12,140	6,062	10,308	4,777
COLORADO	123,009	92,240	12,048	7,375	9,458	6,587
IDAHO	14,734	6,842	4,523	354	1,645	970
MONTANA	18,309	9,657	5,294	1,679	1,679	0
NEVADA	13,933	6,554	3,368	2,205	1,244	462
NEW MEXICO	58,330	46,454	2,790	3,633	2,449	3,004
UTAH	82,538	47,928	6,766	3,582	4,896	2,616
WYOMING	11,049	6,233	251	104	3,448	13
PACIFIC	1,085,111	806,378	61,912	23,390	118,609	74,822
ALASKA	42,154	26,587	1,383	630	10,731	2,623
CALIFORNIA	784,051	602,736	13,629	14,820	97,781	55,085
HAWAII	40,593	25,833	12,399	184	1,446	731
OREGON	72,307	45,099	14,011	2,827	4,475	5,895
WASHINGTON	146,006	106,123	20,490	4,729	4,176	10,488
OUTLYING AREAS	21,027	11,269	6,113	24	3,574	47

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-11. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY GEOGRAPHIC DISTRIBUTION AND FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	6,049,325	862,600	679,658	506,064	191,940	3,210,687	111,019	341,450	145,907
NEW ENGLAND	590,176	100,655	94,945	66,754	19,118	260,575	13,384	27,953	6,792
CONNECTICUT	118,198	6,734	11,034	1,762	2,802	85,410	5,135	5,320	3
MAINE	14,932	1,230	1,205	2,426	146	7,639	73	1,537	266
MASSACHUSETTS	385,509	83,852	75,218	46,413	14,110	134,986	7,231	19,412	3,237
NEW HAMPSHIRE	19,693	1,904	2,913	2,231	101	10,819	297	285	1,143
RHODE ISLAND	34,897	6,620	3,744	13,485	1,900	7,659	500	989	3
VERMONT	15,980	315	831	37	55	14,062	147	410	119
MIDDLE ATLANTIC	979,405	131,763	105,035	50,578	39,781	548,251	21,798	67,138	15,061
NEW JERSEY	85,500	12,907	13,426	6,510	5,379	30,444	4,377	10,594	1,863
NEW YORK	613,629	71,029	63,542	32,772	17,457	376,711	13,458	33,610	5,050
PENNSYLVANIA	280,276	47,827	28,067	11,296	16,945	141,096	3,963	22,934	8,148
EAST NORTH CENTRAL	904,916	130,158	103,877	48,671	23,393	471,350	22,210	73,924	31,333
ILLINOIS	238,817	28,849	33,599	12,688	8,959	122,281	5,222	17,812	9,407
INDIANA	101,532	21,755	19,557	1,447	2,187	46,392	1,985	5,870	2,345
MICHIGAN	217,297	25,951	14,416	15,211	3,003	118,389	6,282	29,509	4,497
OHIO	183,369	38,885	18,133	2,847	4,462	100,993	2,300	5,475	10,274
WISCONSIN	163,901	14,718	18,172	16,444	4,782	83,295	6,421	15,259	4,310
WEST NORTH CENTRAL	442,729	41,880	27,481	16,074	9,001	303,761	12,068	18,546	13,918
IOWA	88,821	11,028	8,713	1,061	2,568	55,558	1,060	3,624	5,229
KANSAS	49,474	6,258	2,573	2,519	427	24,645	5,056	1,655	5,341
MINNESOTA	119,471	9,285	6,715	2,220	1,414	90,719	3,920	4,559	539
MISSOURI	113,375	10,471	5,259	3,260	4,319	83,448	1,419	4,675	524
NEBRASKA	42,893	2,258	3,362	5,215	290	28,438	312	3,055	3
NORTH DAKOTA	17,963	1,681	659	796	23	14,159	165	394	85
SOUTH DAKOTA	10,732	899	200	1,003	0	6,794	135	584	1,115
SOUTH ATLANTIC	938,066	169,548	110,203	71,649	44,434	447,799	10,261	46,373	17,803
DELAWARE	16,746	4,610	1,622	3,109	373	3,653	194	527	2,658
DISTRICT OF COLUMBIA	57,031	5,004	6,430	583	2,595	29,050	366	6,025	5,978
FLORIDA	140,151	22,228	10,284	18,953	4,383	59,644	4,155	9,098	1,406
GEORGIA	136,651	40,653	9,363	4,811	5,886	62,745	1,210	11,540	443
MARYLAND	315,186	60,772	66,074	29,247	47,321	100,319	2,135	4,409	4,939
NORTH CAROLINA	133,623	10,531	6,682	7,494	2,295	96,552	1,134	7,736	1,234
SOUTH CAROLINA	34,346	5,263	2,046	1,694	406	23,160	265	1,512	0
VIRGINIA	86,706	15,610	7,150	5,084	1,101	53,741	765	3,050	205
WEST VIRGINIA	17,621	4,877	552	670	81	8,935	37	2,476	0
EAST SOUTH CENTRAL	201,671	21,137	8,762	3,041	953	157,686	1,574	7,233	1,285
ALABAMA	60,534	4,160	2,254	771	144	51,409	131	319	454
KENTUCKY	38,512	6,201	1,256	927	282	28,272	274	1,128	173
MISSISSIPPI	40,302	4,188	1,752	294	189	30,722	80	2,538	539
TENNESSEE	62,323	5,588	3,500	1,049	338	47,283	1,208	3,248	119
WEST SOUTH CENTRAL	504,210	64,588	52,305	40,267	11,472	282,080	5,197	25,476	22,825
ARKANSAS	30,233	4,155	4,409	406	546	13,541	21	4,729	2,434
LOUISIANA	74,152	5,929	4,520	7,717	1,716	49,671	1,145	3,072	342
OKLAHOMA	48,167	9,492	3,083	7,743	945	20,760	590	4,326	1,248
TEXAS	351,608	45,012	40,313	24,401	8,265	198,108	3,460	13,349	18,700
MOUNTAIN	382,014	83,709	46,381	46,236	4,579	163,125	6,312	22,620	9,052
ARIZONA	77,163	7,514	17,572	13,077	863	31,434	435	5,219	1,099
COLORADO	123,008	20,547	17,882	9,142	1,751	55,213	4,922	9,245	4,306
IDAHO	14,434	911	417	850	291	9,714	21	1,359	152
MONTANA	19,309	2,480	1,518	2,362	81	11,049	40	1,628	151
NEVADA	13,933	1,754	245	5,309	55	5,731	204	635	0
NEW MEXICO	58,330	33,498	2,083	4,581	389	14,271	310	1,692	1,505
UTAH	65,798	16,091	5,359	7,745	1,388	31,547	328	1,933	1,397
WYOMING	11,049	914	1,355	3,170	231	4,166	71	909	441
PACIFIC	1,585,111	119,027	130,220	161,234	18,711	558,741	18,215	51,154	27,809
ALASKA	42,154	555	1,228	28,622	0	9,341	0	1,928	480
CALIFORNIA	784,051	103,482	108,668	93,635	16,415	396,966	15,382	40,940	8,563
HAWAII	40,593	2,491	7,100	9,720	143	15,539	93	1,348	4,159
OREGON	72,307	3,244	5,968	11,916	1,043	42,201	1,075	3,935	2,925
WASHINGTON	146,006	9,255	7,256	17,341	1,110	94,694	1,665	3,003	11,682
OUTLYING AREAS	21,027	135	449	1,564	498	17,319	0	1,033	29

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 9-12. -- PERCENT DISTRIBUTION OF R&D EXPENDITURES BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS AND SOURCE OF FUNDS: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	6,049,325	4,092,569	492,310	235,511	820,940	407,995
			PERCENT DISTRIBUTION			
TOTAL, 1ST 10 INSTS.	22.2	26.2	13.9	15.7	9.9	20.7
TOTAL, 1ST 20 INSTS.	35.9	40.2	20.6	27.9	25.5	35.8
TOTAL, 1ST 30 INSTS.	46.8	50.9	35.1	41.1	34.8	47.5
TOTAL, 1ST 40 INSTS.	55.1	57.1	51.7	50.9	48.3	55.2
TOTAL, 1ST 50 INSTS.	61.9	64.3	58.2	55.9	53.8	61.5
TOTAL, 1ST 60 INSTS.	67.8	69.6	64.0	61.1	63.5	65.7
TOTAL, 1ST 70 INSTS.	72.6	73.7	72.9	66.2	68.7	72.8
TOTAL, 1ST 80 INSTS.	76.8	78.3	75.3	69.2	72.3	77.6
TOTAL, 1ST 90 INSTS.	80.3	81.5	78.4	73.1	78.2	79.3
TOTAL, 1ST 100 INSTS.	83.2	84.2	82.9	75.4	81.4	81.9
TOTAL, 1ST 110 INSTS.	85.7	86.6	85.4	78.5	84.5	83.9
TOTAL, 1ST 120 INSTS.	87.9	88.4	90.0	82.0	86.3	86.5
TOTAL, 1ST 130 INSTS.	89.8	90.2	91.4	83.7	88.0	90.2
TOTAL, 1ST 140 INSTS.	91.3	92.0	91.8	85.5	89.1	91.3
TOTAL, 1ST 150 INSTS.	92.6	93.0	93.0	87.6	91.8	92.2
TOTAL, 1ST 160 INSTS.	93.7	94.1	94.4	88.5	92.7	93.9
TOTAL, 1ST 170 INSTS.	94.6	95.0	94.8	89.9	94.2	94.5
TOTAL, 1ST 180 INSTS.	95.5	95.9	95.1	90.5	94.7	95.4
TOTAL, 1ST 190 INSTS.	96.1	96.5	95.4	93.0	95.8	96.1
TOTAL, 1ST 200 INSTS.	96.7	97.0	95.8	94.0	96.6	96.5
TOTAL, ALL OTHER INSTS.	3.3	3.0	4.2	6.0	3.4	3.5

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 9-13. -- PERCENT DISTRIBUTION OF R&D EXPENDITURES BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS AND FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	6,049,325	862,600	679,658	506,064	191,940	3,210,687	111,019	341,450	145,907
					PERCENT DISTRIBUTION				
TOTAL, 1ST 10 INSTS.	22.2	26.0	28.5	32.6	36.2	18.1	22.6	18.8	15.3
TOTAL, 1ST 20 INSTS.	35.9	39.2	42.1	43.0	47.4	31.5	37.5	39.1	36.6
TOTAL, 1ST 30 INSTS.	46.8	49.2	53.6	48.8	54.1	44.1	45.9	46.7	44.2
TOTAL, 1ST 40 INSTS.	55.1	60.2	59.8	55.8	64.0	52.6	52.3	53.9	50.3
TOTAL, 1ST 50 INSTS.	61.9	64.3	65.6	67.4	68.0	59.9	55.5	57.9	59.3
TOTAL, 1ST 60 INSTS.	67.8	67.7	70.1	70.4	73.9	67.5	63.1	62.2	61.7
TOTAL, 1ST 70 INSTS.	72.6	71.9	73.7	76.9	78.7	72.7	66.5	65.4	69.8
TOTAL, 1ST 80 INSTS.	76.8	77.1	76.1	79.7	80.2	77.6	68.5	67.7	74.4
TOTAL, 1ST 90 INSTS.	80.3	81.0	80.1	81.0	84.5	81.0	75.4	71.9	78.2
TOTAL, 1ST 100 INSTS.	83.2	84.2	82.4	85.0	86.8	83.6	77.2	75.7	84.4
TOTAL, 1ST 110 INSTS.	85.7	86.4	83.7	87.0	87.3	86.7	78.5	78.2	86.5
TOTAL, 1ST 120 INSTS.	87.9	88.7	85.3	88.3	88.0	89.2	81.1	80.6	87.7
TOTAL, 1ST 130 INSTS.	89.8	89.2	86.1	89.4	88.1	92.1	81.5	81.5	88.3
TOTAL, 1ST 140 INSTS.	91.3	90.3	88.1	89.9	89.1	93.7	83.3	83.2	91.3
TOTAL, 1ST 150 INSTS.	92.6	92.0	89.6	90.8	91.2	94.9	84.8	84.7	92.0
TOTAL, 1ST 160 INSTS.	93.7	93.6	91.0	92.4	91.6	95.6	86.2	86.4	93.7
TOTAL, 1ST 170 INSTS.	94.6	94.7	92.1	94.1	92.2	96.4	87.2	87.1	94.4
TOTAL, 1ST 180 INSTS.	95.5	95.6	93.0	94.9	93.6	97.1	88.1	88.7	94.9
TOTAL, 1ST 190 INSTS.	96.1	96.7	93.7	95.3	94.6	97.6	90.1	90.3	95.8
TOTAL, 1ST 200 INSTS.	96.7	97.4	94.8	95.9	95.3	98.0	90.6	90.1	96.3
TOTAL, ALL OTHER INSTS.	3.3	2.6	5.2	4.1	4.7	2.0	9.4	9.2	3.7

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	5,049,325	5,354,438	4,621,291	4,069,867	4,092,569	3,594,386	3,057,158	2,729,755
1 JOHNS HOPKINS UNIVERSITY 1/	253,204	237,725E	65,249	61,858	239,855	224,216E	53,777	50,445
2 MASS INST OF TECHNOLOGY 2/	163,566	141,596	119,620	102,045	138,400	120,971	102,131	85,066
3 UNIV OF WIS-MADISON	138,227	122,239	107,939	100,219	89,350	78,096	68,870	63,645
4 UNIV OF CAL SAN DIEGO	124,830	107,750	95,246	87,636	111,039	96,375	83,848	78,719
5 UNIVERSITY OF MINNESOTA	119,065	106,077	94,706	82,679	68,463	61,150	53,265	48,409
6 STANFORD UNIVERSITY 2/	113,120	101,681	88,198	77,019	102,645	91,511	78,706	71,115
7 UNIVERSITY OF WASHINGTON	111,858	98,967	89,014	77,757	93,109	83,276	74,927	66,066
8 UNIVERSITY OF MICHIGAN	111,316	107,035	86,886	79,922	75,549	67,396	58,436	50,908
9 CORNELL UNIVERSITY 2/	107,611	100,295	83,380	72,286	70,583	67,001	56,730	46,952
10 COLUMBIA UNIV MAIN DIV	101,407	96,831	74,619	72,948	83,729	67,012	59,852	58,973
TOTAL, 1ST 10 INSTS.	1,344,204	1,206,196	904,857	814,369	1,072,721	957,004	688,552	620,298
11 HARVARD UNIVERSITY	100,901E	89,008E	84,150E	73,301	76,377	67,374	63,697	55,485
12 UNIV OF PENNSYLVANIA	94,198	81,961	76,493	70,721	70,553	58,941	52,399	47,313
13 UNIV OF CAL BERKELEY 2/	90,377	75,344	70,307	70,148	64,127	53,520	49,791	50,197
14 UNIV OF CAL LOS ANGELES	88,934	75,496	72,279	69,277	70,365	60,102	57,991	55,956
15 UNIV OF ILL URBANA	83,274	75,972	73,850	59,320	52,327	44,670	42,019	40,558
16 UNIV OF TEXAS AT AUSTIN	78,621	69,695	59,817	49,699	48,666	45,661	39,184	30,118
17 UNIV OF SOUTHERN CAL	74,304	59,077	52,113	32,656	50,001	43,939	39,335	28,319
18 UNIV OF CAL SAN FRANCISCO	73,426	61,140	56,584	49,677	61,172	51,272	46,740	41,220
19 MICHIGAN STATE UNIVERSITY	72,354	62,666	55,438	48,058	34,830	27,827	24,539	22,948
20 PENNSYLVANIA STATE UNIV	71,840	64,954	64,435	44,566	45,001	40,859	42,392	25,757
TOTAL, 1ST 20 INSTS.	2,172,433	1,920,609	1,570,323	1,381,792	1,646,140	1,451,169	1,146,629	1,018,199
21 TEXAS A & M UNIVERSITY	71,461	63,271	59,594	51,810	31,860	28,127	25,123	21,757
22 YALE UNIVERSITY	71,446	63,998	53,521	47,887	63,572	54,970	47,212	42,237
23 OHIO STATE UNIVERSITY	70,652	62,767	50,953	45,367	40,555	35,181	26,377	24,559
24 UNIVERSITY OF ARIZONA	59,095	50,140	43,802	36,430	35,559	31,426	21,756	19,632
25 UNIV OF CAL DAVIS	58,429	55,799	51,440	47,191	35,079	27,949	25,483	24,044
26 UNIVERSITY OF ROCHESTER 2/	55,845	60,067	54,302	53,129	43,890	39,043	36,151	33,502
27 UNIVERSITY OF COLORADO	52,056	47,540	39,694	35,449	48,632	35,631	29,999	27,362
28 PURDUE UNIVERSITY	51,765	55,101	48,049	42,733	38,041	33,497	30,059	25,866
29 WASHINGTON UNIVERSITY	59,379	53,551	48,256	38,431	47,756	42,319	38,301	33,138
30 UNIVERSITY OF CHICAGO 2/	58,436	58,917	58,105	59,332	50,119	45,620	44,197	46,109
TOTAL, 1ST 30 INSTS.	2,930,997	2,499,738	2,078,039	1,839,551	2,081,201	1,824,932	1,471,797	1,316,409
31 NEW YORK UNIVERSITY	56,739	54,163	55,561	47,002	43,705	40,621	41,475	38,922
32 UNIVERSITY OF FLORIDA	56,656E	48,850	46,642	41,895	23,627E	26,060	20,077	14,091
33 GEORGIA INSTITUTE OF TECH	56,653	46,366	35,238	27,782	32,827	27,355	19,633	15,195
34 UNIVERSITY OF GEORGIA	55,595	50,042	44,830	35,216	17,953	15,433	13,722	11,591
35 LOUISIANA STATE UNIV	53,058	49,803	40,490	28,380	15,868	13,018	9,409	8,014
36 IOWA ST U OF SCI & TECH 2/	49,459	45,747	39,947	35,034	16,819	15,209	12,884	10,539
37 OREGON STATE UNIVERSITY	44,713	39,387	34,484	29,195	24,669	21,238	18,757	15,670
38 UNIVERSITY OF CONNECTICUT	44,248	38,964	33,943	29,528	27,510	23,938	20,614	15,588
39 CALIFORNIA INST OF TECH 2/	43,259	36,996	28,433	33,866	38,330	32,602	24,985	29,090
40 N C STATE UNIV AT RALEIGH	42,725	40,000	32,908	30,130	15,611	13,190	10,830	10,630
TOTAL, 1ST 40 INSTS.	3,334,102	2,945,056	2,470,495	2,177,579	2,338,120	2,053,596	1,664,143	1,483,738
41 YESHIVA UNIVERSITY	42,666	35,093	32,164	27,205E	31,540	28,513	27,494	24,627E
42 NORTHWESTERN UNIVERSITY	42,617	36,951	30,970	26,378	31,971	28,280	23,888	20,988
43 UNIV OF ALASKA FAIRBANKS	42,154	36,947	39,367	35,175	26,587	25,431	26,591	24,664
44 UNIVERSITY OF MIAMI	41,450	39,988	37,972	32,455	29,268	28,829	26,130	24,819
45 CASE WESTERN RESERVE UNIV	40,688	35,535	28,927	27,484	29,721	25,290	20,633	19,713
46 COLORADO STATE UNIVERSITY	40,678	36,965	34,615	30,213	28,488	25,570	25,014	21,589
47 UNIV OF HAWAII-MANOA	40,593	35,703	31,971	28,900	25,833	22,500	19,791	17,965
48 UNIV OF MD COLLEGE PARK	39,917	33,578	32,245	26,637	23,174	21,309	20,255	15,877
49 DUKE UNIVERSITY	39,066	36,985	33,491	30,352	36,165	31,817	28,264	27,127
50 UNIV OF NC AT CHAPEL HILL	38,924	33,501	29,277	31,611	31,580	26,971	23,194	25,776
TOTAL, 1ST 50 INSTS.	3,742,855	3,306,282	2,801,494	2,473,989	2,632,447	2,318,106	1,905,367	1,706,859

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 UNIVERSITY OF IOWA	38,866	31,393	27,310	25,472	33,603	25,504	21,333	20,701
52 ROCKEFELLER UNIVERSITY	38,089	35,643	32,395	30,246	19,290	17,297	15,209	13,992
53 BAYLOR COL OF MEDICINE	37,908	33,676	27,431	23,355	31,211	26,304	21,330	21,063
54 UNIVERSITY OF UTAH	37,175	35,865	33,662	31,812	31,588	30,205	28,001	24,575
55 RUTGERS THE ST UNIV OF NJ	36,335	33,280	29,926	26,234	16,159	14,507	12,924	11,517
56 UNIV OF TEX CANCER CENTER	34,920	34,715	28,811	27,748	19,471	19,708	16,170	16,421
57 UNIV OF MISSOURI COLUMBIA	34,620	33,593	31,109	28,511	13,603	13,017	12,294	10,402
58 VA POLYTECH INST & ST U	33,604	29,223	26,224	22,834	16,380	13,678	11,575	10,914
59 UNIV OF NEBRASKA-LINCOLN	32,607	30,897	25,521	23,198	10,380	7,925	8,040	6,397
60 UNIVERSITY OF PITTSBURGH	31,863	30,001	28,948	23,958	23,327	21,700	20,523	18,286
TOTAL, 1ST 60 INSTS.	4,098,842	3,634,568	3,092,811	2,737,357	2,946,459	2,507,951	2,072,755	1,951,129
61 WASHINGTON STATE UNIV	31,538	26,160	23,163	20,108	11,855	10,916	9,849	5,808
62 UNIV ALABAMA BIRMINGHAM	30,959	27,089	23,275	19,701	25,171	22,407	20,342	17,327
63 INDIANA UNIV	30,307	27,284	25,092	19,997	22,278	20,800	19,333	15,795
64 UNIVERSITY OF KENTUCKY	30,013	29,683	25,803	20,440	13,093	12,643	10,110	7,137
65 CARNEGIE-MELLON UNIV	29,308	24,779	24,755	19,039	19,645	15,982	15,939	12,232
66 WOODS HOLE OCNGRPHIC INST	29,209	28,004	25,847	20,073	25,042	24,714	22,356	17,392
67 MISSISSIPPI STATE UNIV	29,035	26,054	22,121	18,439	9,824	7,445	6,695	5,257
68 UNIVERSITY OF CINCINNATI	28,991	24,969	26,167	23,573	16,041	13,474	10,980	10,140
69 PRINCETON UNIVERSITY 2/	27,821	26,121	23,400	23,424	20,895	19,230	17,953	16,851
70 KANS ST U - AG & APP SCI	27,793	24,539	21,775	17,793	8,677	7,469	6,554	6,133
TOTAL, 1ST 70 INSTS.	4,393,816	3,899,250	3,334,209	2,939,944	3,017,990	2,663,031	2,219,565	1,975,210
71 UNIVERSITY OF VIRGINIA	27,297	23,086	20,540	19,323E	23,606	20,101	18,033	15,335E
72 CUNY MT SINAI SCH OF MED	26,718	23,130	21,588	19,308	21,182	17,886	16,510	16,036
73 U TEX HLTH SCI CTR DALLAS	26,586	22,613	19,719	16,755	20,871	17,872	15,673	13,393
74 SUNY AT STONY BROOK	26,183	23,500	21,585	14,466	18,460	16,734	15,724	11,843
75 NEW MEXICO STATE UNIV	25,618	19,601	15,404	12,740	21,719	16,457	13,553E	11,210
76 UNIV OF CAL RIVERSIDE	24,961	21,568	20,245	18,365	8,862	7,456	6,776	5,814
77 UTAH STATE UNIVERSITY	24,611	17,726	14,712	14,092	14,819	11,077	8,793	9,689
78 BOSTON UNIVERSITY	24,393	21,190	19,648	18,682	22,238	19,070	17,654	16,124
79 UNIVERSITY OF NEW MEXICO	24,242	25,525	20,098	13,397	19,024	17,246	14,192	9,449
80 SUNY AT BUFFALO	23,437	22,020	20,334	18,130	15,664	14,490	12,983	14,907
TOTAL, 1ST 80 INSTS.	4,647,862	4,119,209	3,528,072	3,105,202	3,204,424	2,821,400	2,358,946	2,100,701
81 OKLAHOMA STATE UNIVERSITY	23,417	20,332	18,466	17,779	11,107	5,268	7,033	7,335
82 UNIV OF CAL IRVINE	23,303	17,759	15,705	14,299	20,211	14,765	13,338	12,046
83 FLORIDA STATE UNIVERSITY	21,497	16,567	16,500E	16,220	8,501	7,210	9,230E	8,606
84 UNIV OF ARK FAYETTEVILLE	21,126	20,779	16,056	10,392	2,902	2,633	4,193	3,408
85 WAYNE STATE UNIVERSITY	20,818	19,840	20,262	17,862	12,196	12,257	12,647	7,649
86 VANDERBILT UNIVERSITY	20,570	18,019	16,837	18,773	16,498	14,350	13,373	16,042
87 AUBURN UNIVERSITY	20,248	20,671	16,924	15,919	6,969	6,248	6,123	5,642
88 UNIVERSITY OF KANSAS	19,869	17,374I	15,442	18,134	16,676	7,568I	8,523	12,499
89 UNIVERSITY OF DAYTON	19,678	17,282	12,779	10,180	17,989	15,068	11,185	9,000
90 GEORGE WASHINGTON UNIV	18,961	19,133	20,114	18,330	16,780	16,448	17,932	16,844
TOTAL, 1ST 90 INSTS.	4,357,349	4,306,965	3,697,157	3,257,090	3,334,252	2,925,215	2,462,493	2,199,772
91 TEMPLE UNIVERSITY	18,613	17,340	17,524	17,415	13,686	12,973	13,213	12,873
92 CLEMSON UNIVERSITY	18,366	17,181	14,264	12,782	5,847	4,997	4,093	4,365
93 VIRGINIA COMMONWLTH UNIV	18,119	14,966	12,134	11,793	14,675	12,112	9,873	9,473
94 BROWN UNIVERSITY	17,950	14,533	12,882	11,711	15,375	12,312	10,953	9,845
95 WEST VIRGINIA UNIVERSITY	17,510	15,377	11,036	11,634	9,225	8,803	6,471	6,452
96 GEORGETOWN UNIVERSITY	17,502	15,265	12,632	12,644	9,559	8,906	7,354	6,117
97 UNIV OF RHODE ISLAND	16,932E	15,678	11,197I	9,822	13,847	12,821	10,752I	9,515
98 UNIVERSITY OF DELAWARE	16,746	14,363	11,575	9,925	9,180	8,117	6,787	5,544
99 UNIV OF MASS AT AMHERST	16,624	19,807	16,443	15,112	9,871	12,084	9,938	8,880
100 SYRACUSE UNIVERSITY	16,517	13,099	12,837	6,620	8,626	7,339	7,639	5,624
TOTAL, 1ST 100 INSTS.	5,032,228	4,664,574	3,829,681	3,376,548	3,444,142	3,025,679	2,549,556	2,278,461

SEE FOOTNOTES AT END OF TABLE.

TABLE 8-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
101 U TEX MED BRNCH GALVESTON	16,041	13,835	11,899	11,858	10,387	8,702	7,618	7,219
102 UNIV OF OKLAHOMA NORMAN	15,805	8,811	7,138	7,915	7,634	5,277	4,316	6,923
103 EMORY UNIVERSITY	15,725	14,546	13,363	12,657	13,559	12,872	11,873	11,475
104 INST OF AGRI UNIV OF TENN	15,711I	13,750I	12,221	8,204	6,878I	5,942I	5,293	2,750
105 UNIV OF VT & ST AGRIC COL	15,685	13,887	13,636	13,095	11,640	10,087	10,158	9,806
106 UNIV OF MD BALT PROF SCH	15,088	12,000	11,005	11,501	13,322	10,852	9,834	9,824
107 RENSSELAER POLYTECH INST	14,824	10,963	8,278	6,999	9,192	7,709	6,057	5,231
108 UNIVERSITY OF DENVER	14,743	16,322	9,948	8,606	10,786	12,342	8,237	6,452
109 UNIV OF ILL MED CTR CHGO	14,644	11,929	10,399	8,529	10,329	8,831	7,451	6,231
110 UNIV OF MAINE ORONO	14,339	12,320	11,022	9,704	5,825	6,527	5,372	4,113
TOTAL, 1ST 110 INSTS.	5,184,833	4,592,937	3,938,590	3,475,616	3,543,693	3,114,820	2,625,805	2,348,485
111 U TEX HLTH SCI CTR S ANTO	13,972	11,535	9,859	8,436	10,159	8,152	5,742	5,147
112 UNIV OF CAL SANTA BARBARA	13,967	12,038	9,025	6,700	11,0[illegible]8	9,579	7,274	5,421
113 MONTANA STATE UNIVERSITY	13,737	12,478	12,177	10,293	6,204	5,120	5,624	4,873
114 UNIVERSITY OF IDAHO	13,721	12,832	12,352	14,554	[illegible]402	5,711	4,955	6,037
115 TEXAS TECH UNIVERSITY	13,032	12,075	9,746	7,119	6,363	5,617	4,253	3,170
116 NORTH DAKOTA STATE UNIV	12,984	10,792	9,953	9,626	2,893	2,607	2,370	2,437
117 UNIV OREGON HLTH SCI CTR	12,854	10,459F	10,234I	8,977	8,836	8,519E	8,263I	7,512
118 U TENNESSEE KNOXVILLE	12,742E	12,742	10,961	6,058	9,169E	9,169	7,631	4,581
119 U OF HOUSTON CENTRAL CAM	12,628	11,924	8,514I	7,468	6,154	5,320	4,932I	4,365
120 TULANE UNIVERSITY	12,426	11,754	11,303	11,655	7,990	7,557	7,257	7,493
TOTAL, 1ST 120 INSTS.	5,316,896	4,711,564	4,042,714	3,564,502	3,619,240	3,192,171	2,685,126	2,399,621
121 COL OF MED & DENT OF N J	12,394	9,897	8,121	3,664	9,095	6,337	5,745	2,927
122 UNIV OF P R-MAYAGUEZ	12,162	11,306	11,000E	10,504E	4,889	4,634	3,903E	3,727E
123 TUFTS UNIVERSITY	11,783	8,921E	8,416I	7,514	10,059	6,[illegible]6E	5,934I	5,346
124 HOWARD UNIVERSITY	11,658	6,442	7,877	3,442	8,172	4,942	5,849	2,934
125 ALBANY MEDICAL COLLEGE	11,420	10,221	8,368	8,148	5,351	5,434	5,588	3,917
126 U TEX HLTH SCI CTR HOUSTN	11,340	7,965	6,734	7,268	8,811	6,12[illegible]	4,941	5,747
127 UNIVERSITY OF WYOMING	11,049	9,768	10,160	11,072	6,233	[illegible],798	6,155	7,250
128 SUNY DOWNSTATE MED CTR	10,799	10,357	10,185	10,393	7,359	7,752	8,036	8,200
129 MEDICAL COLLEGE OF WIS	10,655	8,482	7,455	5,817	6,664	5,239	4,702	4,221
130 UNIV OF NEW HAMPSHIRE	10,112	9,189	8,606	6,674	5,189	5,378	4,356	3,147
TOTAL, 1ST 130 INSTS.	5,430,268	4,804,112	4,129,636	3,638,[illegible]98	3,692,061	3,240,157	2,740,335	2,447,037
131 DARTMOUTH COLLEGE	9,578	8,701	7,726	7,03[illegible]	8,451	7,707	7,075	6,400
132 BRANDEIS UNIVERSITY	9,566	9,230	6,960	7,571	8,854	8,683	6,703	6,840
133 THOMAS JEFFERSON UNIV	9,532E	9,254	7,579	7,560	7,739E	7,514	6,054	6,147
134 UNIV TENN CTR HEALTH SCI	9,529	8,157	7,165	7,719	8,182	6,440	5,921	6,493
135 LEHIGH UNIVERSITY	9,413	8,468	7,619	6,960	5,131	4,377	3,761	3,512
136 UNIVERSITY OF OREGON MAIN	9,104	7,951	6,819	11,258	7,893	6,573	5,655	8,387
137 UNIV OF ILL CHICAGO CIR	8,918	7,759	4,790	4,152	5,722	5,053	3,639	2,878
138 UNIVERSITY OF NOTRE DAME	8,845	6,935	6,300	6,247	7,816	5,944	5,518	5,475
139 RUSH UNIVERSITY	8,815	7,914	7,366	3,397	6,195	5,528	5,293	2,518
140 MED UNIV OF SO CAROLINA	8,615	6,205	5,948	5,225	6,774	5,395	4,704	4,049
TOTAL, 1ST 140 INSTS.	5,522,183	4,884,686	4,197,908	3,706,098	3,764,818	3,303,371	2,794,635	2,499,736
141 ST JOHN'S UNIVERSITY (NY)	8,519	8,081	7,262	6,639	636	554	307	593
142 MICHIGAN TECH UNIVERSITY	8,483	7,148	6,006	4,977	3,193	2,834	2,137	1,672
143 SOUTH DAKOTA STATE UNIV	8,129	7,155	6,682	5,830	3,370	2,814	2,355	2,009
144 RICE UNIVERSITY	8,029	7,374I	6,553	6,222	6,184	5,825I	5,171	4,963
145 UNIVERSITY OF MISSISSIPPI	7,976	6,953E	6,664	4,965	4,221	3,690E	3,[illegible]	3,860
146 UNIV OF CAL SANTA CRUZ	7,844	6,599	6,865	5,836	5,823	4,756	[illegible],991	4,298
147 UNIV OF NEVADA - RENO	7,811	6,158	5,994	5,180	3,486	2,456	2,153	1,964
148 U OF NEB MED CTR AT OMAHA	7,419	7,154	7,148	6,478	5,213	4,935	5,212	4,690
149 N MEX INST MINING & TECH	7,312	5,413	3,009	2,327	5,011	3,603	2,038	1,835
150 UNIV OF OKLA HLTH SCI CTR	7,214	4,915	3,960	-	4,547	3,942	3,026	-
TOTAL, 1ST 150 INSTS.	5,600,919	4,951,636	4,258,091	3,754,552	3,806,502	3,338,780	2,825,656	2,525,620

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
151 UNIV OF WIS-MILWAUKEE	7,029	7,406	6,154	5,192	3,705	3,739	2,875	2,082
152 ARIZONA STATE UNIVERSITY	6,938	8,086	5,113	4,441	5,939	4,491	4,073	3,077
153 POLYTECHNIC INST OF N Y	6,814E	6,380	5,696	4,746	4,584E	4,292	4,020	3,327
154 SUNY AT ALBANY	6,711E	6,058	5,176	4,116	5,206	4,584	3,848	3,194
155 ST LOUIS UNIVERSITY	6,695E	6,695	6,798	10,001I	5,139E	5,139	6,177E	8,295I
156 UNIV OF SOUTH CAROLINA	6,599E	6,346	3,240I	2,842	4,849E	4,658	2,211I	1,957
157 SOUTHERN ILL U-CARBONDALE	6,589	5,196	4,670	3,854	3,044	1,970	2,113	1,687
158 UNIVERSITY OF LOUISVILLE	6,489	6,397	7,345	5,995	4,184	3,394	3,537	3,765
159 UNIV OF MISSOURI ROLLA	6,421	5,419	5,218	5,069	3,064	2,486	2,333	2,521
160 SUNY UPSTATE MEDICAL CTR	6,345E	5,875	7,109I	6,236	4,029E	3,731	5,179I	4,583
TOTAL, 1ST 160 INSTS.	5,667,549	5,015,494	4,314,570	3,807,044	3,850,240	3,377,264	2,862,032	2,560,109
161 US NAVAL POSTGRAD SCHOOL	6,314	5,866	4,481	4,756	6,246	5,802	4,232	4,749
162 UNIV OF TEXAS AT DALLAS	6,038	6,095	6,091	-	4,223	4,639	5,108	-
163 WAKE FOREST UNIVERSITY	5,972E	5,645E	5,336	4,689	4,888E	4,620E	4,357	3,931
164 SUNY COL OF ENV SCI & FOR	5,699	5,998	5,832	2,992	1,686	1,666	1,537	1,665
165 NORTHEASTERN UNIVERSITY	5,669I	5,036	4,250	3,999	4,742I	4,179	3,140	3,066
166 UNIV OF CENTRAL FLORIDA	5,582	3,352	-	2,105	2,853	2,485	-	482
167 U OF CAL SYS WIDE PRGMS	5,568	4,214	4,346	3,766	656	477	222	172
168 U OF ARKANSAS MED SCI CAM	5,511	4,573	4,549	3,757	4,275	3,704	3,696	3,077
169 MEDICAL COL OF GEORGIA	5,476	5,065	5,121	6,366	5,123	4,752	4,368	3,807
170 DESERT RESEARCH INSTITUTE	5,443	5,759	4,506	3,224	2,604	2,581	2,074	1,967
TOTAL, 1ST 170 INSTS.	5,724,821	5,067,117	4,359,082	3,842,698	3,887,536	3,412,169	2,890,906	2,583,024
171 BOSTON COLLEGE	5,430	4,225	3,332	3,788	4,818	3,587	3,038	3,068
172 DREXEL UNIVERSITY	5,367	4,086	5,134	3,389	3,960	2,973	3,496	2,549
173 MED COL OF OHIO AT TOLEDO	5,362	4,405	4,397	4,249	3,925	3,460	3,572	3,421
174 NEW YORK MEDICAL COLLEGE	5,233E	5,233	5,679	6,180	4,363E	4,363	4,751	5,011
175 UNIVERSITY OF N DAKOTA	4,979E	4,632I	4,117	3,900	3,996E	3,700I	3,296	3,285
176 NC AG & TECH STATE UNIV	4,969	4,765	-	1,470	4,888E	4,687	-	1,317
177 WRIGHT STATE UNIVERSITY	4,923	4,798	5,787	1,755	3,365	3,238	3,156	1,424
178 UNIV OF SOUTH FLORIDA	4,771	4,267	4,718	5,385	2,759	2,467	3,071	3,274
179 COLORADO SCHOOL OF MINES	4,510	2,897I	2,575	2,312	3,741	2,018I	1,798	1,633
180 SUNY AT BINGHAMTON	4,504	3,173	2,902	2,229	3,264	2,244	2,373	1,669
TOTAL, 1ST 180 INSTS.	5,774,869	5,109,598	4,397,723	3,877,355	3,926,615	3,444,906	2,919,457	2,609,675
181 SAN DIEGO STATE UNIV	4,417	4,527	4,162	4,234	3,556	3,451	3,290	3,353
182 UNIV OF WEST FLORIDA	4,333	2,668	-	2,070	1,967	1,303	-	587
183 STEVENS INSTITUTE OF TECH	4,130	3,580	4,118	3,734	2,460	2,006	2,315	2,388
184 LOMA LINDA UNIVERSITY	4,091E	3,799	3,575	3,155	3,111E	2,886	1,657	1,796
185 HAHNEMANN MED COL & HOSP	4,070E	3,936	3,806I	3,398	3,158E	2,946	2,747I	2,475
186 BRIGHAM YOUNG UNIVERSITY	4,002E	3,706	3,925	3,838	1,521E	1,408	1,768	1,425
187 NORTHERN ILLINOIS UNIV	3,898	3,352	1,319	1,563I	1,233	1,216	1,136	1,053I
188 WORCESTER POLY INSTITUTE	3,696	3,359	2,622	2,644	2,035	1,138	763	747
189 U MASS MED SCHL WORCESTER	3,676	4,866	3,497	2,816	2,404	3,492	2,404	1,970
190 INSTITUTE PAPER CHEMISTRY	3,664E	3,476	3,159	2,468	48E	46	90	88
TOTAL, 1ST 190 INSTS.	5,914,846	5,146,867	4,427,906	3,907,275	3,948,109	3,464,798	2,935,577	2,625,557
191 CLARKSON COLLEGE OF TECH	3,624	3,170	2,261	1,942	2,639	2,282	1,537	1,419
192 CUNY CITY COLLEGE	3,565	2,635	-	3,424	3,299	2,341	-	2,526
193 UNIV OF ARK PINE BLUFF	3,564	2,635	-	2,472	2,106	1,256	-	1,244
194 UNIV OF MO CENTRAL OFF	3,541	3,100	3,115	3,052	469	373	402	380
195 LOYOLA UNIV - CHICAGO	3,532I	3,138E	2,989	1,956	2,834I	2,498E	2,379	1,663
196 NORTH TEXAS STATE UNIV	3,456E	3,307	2,424	1,702	1,970E	1,859	1,035	576
197 UNIVERSITY OF NEW ORLEANS	3,447	2,550	2,320	2,391	1,660	1,080	1,046	1,626
198 UNIV OF P R-MED SCI CMPUS	3,342I	2,925I	2,600E	2,559I	3,342I	2,908I	2,590E	2,527I
199 OREGON GRADUATE CENTER	3,210	2,939	3,007	-	1,870	1,381	1,044	-
200 OHIO UNIVERSITY	3,187	2,608	1,419	1,370	1,600	1,476	1,077	1,127
TOTAL, 1ST 200 INSTS.	5,349,314	5,175,874	4,448,041	3,928,143	3,969,897	3,482,252	2,946,657	2,638,645

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
201 CATHOLIC UNIV OF AMERICA	3,017	2,487	2,371	2,176	2,677	2,029	1,835	1,832
202 ILLINOIS INST OF TECH	3,010I	2,674	2,111	2,638	1,962I	1,729	1,523	2,093
203 UNIV ALABAMA HUNTSVILLE	2,995	2,236	1,682	2,095	2,385	1,534	1,269	1,537
204 UNIVERSITY OF MONTANA	2,898	4,086	3,371	2,802	1,539	1,854	2,235	1,705
205 UNIF SERV UNIV OF HLTH SC	2,853	1,004	1,411	-	2,853	1,004	1,410	-
206 SOUTHERN METHODIST UNIV	2,743	2,399	2,323	1,905	1,964	1,760	1,603	1,352
207 FLORIDA A & M UNIVERSITY	2,739I	2,382	-	2,757	2,548I	2,265	-	2,717
208 THE MEDICAL COL OF PENNA	2,651	2,716	2,405	1,816	2,381	2,400	2,002	1,419
209 N J INST OF TECHNOLOGY	2,589	1,784	1,594	1,227	1,086	1,000	919	891
210 GALLAUDET COLLEGE	2,589E	2,589I	-	2,060	0	615I	-	456
TOTAL, 1ST 210 INSTS.	5,977,398	5,200,231	4,465,309	3,947,619	3,989,292	3,498,442	2,959,573	2,652,654
211 OLD DOMINION U RES FDN	2,460E	2,281	2,556	1,989	0	2,160	2,332	1,855
212 AMERICAN UNIVERSITY	2,456	2,417	2,512	2,324	2,374	2,401	2,262	2,088
213 UNIV OF SOUTH ALABAMA	2,417E	2,273	2,095	1,075	1,793	1,721	1,550	621
214 OAKLAND UNIVERSITY	2,358	1,626	1,307	969	1,564	1,230	951	825
215 CREIGHTON UNIVERSITY	2,348I	2,086F	1,987	1,086	1,566I	1,380E	1,314	805
216 NEW YORK INST TECHNOLOGY	2,301	2,280	-	1,035	104	60	-	280
217 UNIV OF P R-RIO PIEDRAS	2,293I	2,007I	1,784	1,179	1,044I	904I	805	319
218 UNIVERSITY OF LOWELL	2,280	2,216	1,891	1,060	1,561	1,508	1,359	791
219 UNIVERSITY OF GUAM	2,114	1,038I	-	826	1,100	591I	-	438
220 WENTWORTH INST OF TECH	2,109	1,373	-	960	2,088	1,335	-	853
TOTAL, 1ST 220 INSTS.	5,900,533	5,219,822	4,479,441	3,960,072	4,002,488	3,511,732	2,970,156	2,661,540
221 TEXAS CHRISTIAN UNIV	2,086	2,638	1,838	3,200	1,479	2,113	1,443	2,500
222 WESLEYAN UNIVERSITY	1,956E	1,956	1,614	1,305	1,296E	1,296	1,034	877
223 VIRGINIA STATE UNIVERSITY	1,913	2,128	-	679	1,904	2,128	-	679
224 THE UNIVERSITY OF ALABAMA	1,911E	1,762	1,758	1,483	832E	767	1,092	1,142
225 SOUTHERN U & A&M COLLEGE	1,875	964	-	1,257	1,875	964	-	1,257
226 ATLANTA UNIVERSITY	1,797	2,245	815	562	1,548	1,750	688	476
227 CALIF ST COL STANISLAUS	1,773	103	-	129	89	21	-	107
228 SAN JOSE STATE UNIVERSITY	1,762I	1,532E	-	1,459	1,289I	1,146E	-	1,091
229 WICHITA STATE UNIVERSITY	1,736	1,246	952	920	341	292	310	301
230 UNIV OF SOUTHWESTERN LA	1,702	1,614	1,888	-	710	618	739	-
TOTAL, 1ST 230 INSTS.	5,919,044	5,236,010	4,488,306	3,971,066	4,013,851	3,522,827	2,975,452	2,669,970
231 ROCHESTER INST TECHNOLOGY	1,701	1,516	-	932	521	253	-	87
232 MONT COL MINRL SCI & TECH	1,674	1,429	-	1,073	1,614	1,294	-	1,014
233 U OF MD BALTIMORE COUNTY	1,606	1,187	944	821	1,329	896	750	616
234 S DAK SCH MINES & TECH	1,604E	1,604	1,381	1,147I	862E	862	1,050	697I
235 PORTLAND STATE UNIVERSITY	1,570E	1,427	1,605	1,482	1,180E	1,073	1,256	1,019
236 UNIVERSITY OF TULSA	1,540	843	900	534	703	278	445	176
237 WELLESLEY COLLEGE	1,472	441	-	278	622	266	-	218
238 CUNY QUEENS COLLEGE	1,471	1,533	-	1,121	874	966	-	790
239 THE WRIGHT INSTITUTE	1,461	968	759	465E	1,392	922	752	465E
240 BOWLING GREEN STATE UNIV	1,453E	1,352	1,255	1,342	910E	845	786	833
TOTAL, 1ST 240 INSTS.	5,934,596	5,248,310	4,495,150	3,980,261	4,023,857	3,530,482	2,980,511	2,675,875
241 UNIVERSITY OF REDLANDS	1,446I	1,291	-	30	30I	27	-	30
242 UNIV OF STHRN MISSISSIPPI	1,440	808	778	1,037	1,022	446	355	627
243 UNIV OF TEXAS AT EL PASO	1,436	1,917	1,282	1,169	899	1,110	694	842
244 CUNY BROOKLYN COLLEGE	1,428I	1,242	-	1,016	959I	852	-	666
245 CLEVELAND STATE UNIV	1,407	972	414	463	351	217	192	191
246 PRAIRIE VIEW A & M UNIV	1,381E	1,381I	-	1,099	1,349E	1,349I	-	1,000
247 CUNY GRAD SCH & UNIV CTR	1,379	1,554	1,154	1,626	1,212	1,291	1,038	1,522
248 FAIRLEIGH DICKINSON UNIV	1,356	1,344	733	386	878	923	535	116
249 UNIV OF TEX AT ARLINGTON	1,354	957	829	744	540	423	337	303
250 CLARK UNIVERSITY	1,348	1,446	1,337	1,023E	1,048	1,041	1,174	902
TOTAL, 1ST 250 INSTS.	5,963,571	5,261,222	4,501,677	3,988,854	4,032,144	3,538,161	2,984,835	2,682,054

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
251 SUNY COLLEGE BUFFALO	1,337I	1,163I	-	925	1,309I	1,163I	-	870
252 ALABAMA A & M UNIVERSITY	1,313	1,332I	-	1,060	1,305	935I	-	693
253 FLORIDA INST OF TECH	1,269	667	590	609	701	346	234	293
254 CALIF ST UNIV LOS ANGELES	1,268E	1,077	-	860	1,107	813	-	746
255 UNIVERSITY OF AKRON	1,251	1,000	1,168	1,127	696	650	652	682
256 LOUISIANA TECH UNIVERSITY	1,245	1,153	917	619	685	555	317	524
257 US NAVAL ACADEMY	1,217I	1,087	-	903	1,217I	1,087	-	901
258 SUNY COLLEGE NEW PALTZ	1,201I	1,044I	-	831	596I	530I	-	393
259 TEXAS A & I UNIVERSITY	1,186	1,092	-	1,018	240	287	-	251
260 MURRAY STATE UNIVERSITY	1,166I	1,014	-	126	44I	39	-	55
TOTAL, 1ST 260 INSTS.	5,951,024	5,271,851	4,504,352	3,996,932	4,040,046	3,544,566	2,986,039	2,687,472
261 MEMPHIS STATE UNIVERSITY	1,159	1,376	772	881	279	269	53	249
262 UNIVERSITY OF TOLEDO	1,159	1,177	762	771	463	348	372	316
263 NORTHERN ARIZONA UNIV	1,130	899	890	956	379	338	379	309
264 UNIVERSITY OF SANTA CLARA	1,108I	984I	874I	780	1,088I	959I	851I	757
265 MARQUETTE UNIVERSITY	1,103	856	756	914	798	453	481	525
266 SAN FRANCISCO STATE UNIV	1,100	953	-	505	972	902	-	504
267 U HLTH SCI/CHCGO MED SCH	1,094I	972	665	668	767I	676	481	424
268 FORDHAM UNIVERSITY	1,092E	1,012	1,229	904I	1,084E	745	936	744I
269 EAST CAROLINA UNIVERSITY	1,086	992	694I	609	514	334	236I	209
270 UNIV OF MISSOURI KAN CITY	1,076	1,079	1,466	1,807	332	384	718	1,077
TOTAL, 1ST 270 INSTS.	5,972,131	5,281,951	4,512,460	4,005,727	4,046,721	3,549,974	2,990,436	2,692,595
271 MIAMI UNIVERSITY (OHIO)	1,062E	983	692	701	676E	626	481	447
272 KENT STATE UNIVERSITY	1,050E	912	2,123	1,780	864E	745	759	734
273 GEORGIA STATE UNIVERSITY	1,046	1,140	934	1,066	475	469	323	429
274 NOVA UNIVERSITY	1,044I	927	1,207	1,061	669I	590	950	765
275 U OF MD EASTERN SHORE	1,024I	914	-	520	1,024I	914	-	520
276 CENTRAL WASHINGTON UNIV	1,013	1,553	-	162	74	521	-	93
277 ILLINOIS STATE UNIVERSITY	1,005	575	361	239	425	299	195	184
278 JACKSON STATE UNIVERSITY	996	511	-	378	818	494	-	379
279 COLLEGE OF WILLIAM & MARY	975E	975	661	757	923E	923	605	729
280 POMONA COLLEGE	969E	919	-	343	886E	841	-	303
TOTAL, 1ST 280 INSTS.	5,982,315	5,291,360	4,518,438	4,012,734	4,053,555	3,556,396	2,993,309	2,697,227
281 ALFRED UNIVERSITY	954E	883	360	468	72E	67	77	180
282 TEXAS WOMAN'S UNIVERSITY	954	757	821	793	223	216	217	49
283 MANHATTAN COLLEGE	941	693	-	553	851	480	-	409
284 OCCIDENTAL COLLEGE	922	620	-	397E	219	232	-	56E
285 UNIV OF MASS BOSTON	922E	854	-	1,510	654E	606	-	561
286 WESTERN WASHINGTON UNIV	915	989	-	571	743	909	-	440
287 CALIF ST U LONG BEACH FDN	914	620	-	475	595	426	-	264
288 UNIV OF SOUTH DAKOTA	875	791	726	1,397	537	475	521	573
289 AMHERST COLLEGE	853	813	-	614	789	759	-	531
290 US AIR FORCE ACADEMY	851	736	-	799	851	736	-	799
TOTAL, 1ST 290 INSTS.	5,991,416	5,299,116	4,520,345	4,020,311	4,059,088	3,561,302	2,994,524	2,701,089
291 UNIVERSITY OF D C	648I	737	-	171	829I	737	-	171
292 TENN TECHNOLOGICAL UNIV	844	834	527	480	356	323	217	191
293 ALCORN STATE UNIVERSITY	839I	749I	-	596	839I	749I	-	573
294 S ILLINOIS U EDWARDSVILLE	829	655	503	500	302	258	217	160
295 INSTITUTE OF TEXTILE TECH	823I	731I	650	550	0I	0I	0	0
296 UNIVERSITY OF THE PACIFIC	779I	692I	615	921	593I	523I	464	636
297 CENTRAL MICHIGAN UNIV	763I	668E	630	296	111I	96E	91	30
298 HARVEY MUDD COLLEGE	748	107I	-	85	418	86I	-	64
299 NE OHIO UNIVS MED SCHOOL	748	1,746	-	-	566	772	-	-
300 EAST TENNESSEE STATE UNIV	739	470	85	30	401	218	10	2
TOTAL, 1ST 300 INSTS.	5,999,376	5,306,505	4,523,355	4,023,940	4,063,503	3,565,064	2,995,623	2,702,916

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
301 EMMANUEL COLLEGE	731	913I	-	726	728	913I	-	723
302 TEXAS COL OF OSTEO MED	720	649	439	-	300	73	12	-
303 UNIV OF MISSOURI ST LOUIS	717	669	599	637	396	348	343	387
304 IDAHO STATE UNIVERSITY	713	1,153	1,090	661	540	843	933	523
305 COL OF THE VIRGIN ISLANDS	693I	619	-	339	596I	532	-	260
306 STEPHEN F AUSTIN ST UNIV	690	710	790	696	352	364	386	374
307 TRINITY UNIVERSITY	687	509	-	342	526	323	-	155
308 FLORIDA ATLANTIC UNIV	687	720	-	398	332	372	-	206
309 WESTERN ILLINOIS UNIV	682	582	-	420	178	163	-	119
310 UNIV OF NEVADA LAS VEGAS	679	655	-	639	564E	547	-	276
TOTAL, 1ST 310 INSTS.	5,306,375	5,313,688	4,526,273	4,028,798	4,068,015	3,569,542	2,997,297	2,705,939
311 TENNESSEE STATE UNIV	670E	-	-	-	0	-	-	-
312 EASTERN NEW MEXICO UNIV	669E	620	-	625	239E	230	-	337
313 SAM HOUSTON STATE UNIV	644	472	260	226	396	222	79	80
314 TUSKEGEE INSTITUTE	631	501	-	837	615	470	-	833
315 SETON HALL UNIVERSITY	627I	557I	495	231I	582I	513I	455	521
316 REED COLLEGE	608	496	-	350	570	440	-	327
317 DENISON UNIVERSITY	605E	518	-	265	276E	236	-	101
318 UNIV OF WIS-LA CROSSE	589	488	-	191	277	182	-	26
319 NORFOLK STATE UNIVERSITY	580	230	-	259	580	228	-	254
320 CAL POLY ST U SAN LUIS OB	575E	564I	-	449	575E	564I	-	433
TOTAL, 1ST 320 INSTS.	6,312,573	5,318,134	4,527,028	4,032,231	4,072,124	3,572,627	2,997,931	2,708,412
321 LAMAR UNIVERSITY	568	434	247	251	208	369	136	129
322 CUNY BERNARD BARUCH COL	563I	490	-	356	141I	125	-	260
323 BOWDOIN COLLEGE	563	273	-	233	195	42	-	58
324 UNIV OF WIS-SUPERIOR	550	483	-	328	420	368	-	194
325 UNION COLLEGE (NY)	526	440	595	596	223	128	194	207
326 WEST TEXAS STATE UNIV	525	515	-	227	62	108	-	19
327 WESTERN MICHIGAN UNIV	517E	470I	418	397	222E	202I	180	221
328 XAVIER UNIVERSITY	509	543	-	347	177	165	-	95
329 SOUTH CAROLINA ST COLLEGE	508E	48E	-	632I	508E	486	-	620I
330 LONG ISLAND UNIVERSITY	504	344	185E	165	447	301	73E	73
TOTAL, 1ST 330 INSTS.	6,317,906	5,322,612	4,528,453	4,035,763	4,074,727	3,574,921	2,998,414	2,710,288
331 PAN AMERICAN UNIVERSITY	502	564	-	639	477	550	-	608
332 SOUTHWEST MISSOURI ST U	502	352	-	277	14	19	-	1
333 DUQUESNE UNIVERSITY	500E	461	358	281	0	333	254	270
334 SMITH COLLEGE	493	222	170	309	188	151	154	279
335 BUCKNELL UNIVERSITY	486	410	-	217	341	285	-	157
336 VILLANOVA UNIVERSITY	482	298	266	255	420	241	187	175
337 MILWAUKEE SCHOOL OF ENG	474	298	-	229I	0	0	-	0I
338 BAYLOR UNIVERSITY	471	513	678	658	58	36	58	114
339 CHICAGO COL OF OSTEO MED	469I	416	248	388	51I	45	15	32
340 UNIV OF NEBRASKA AT OMAHA	456	548	50	-	323	179	21	-
TOTAL, 1ST 340 INSTS.	6,322,740	5,326,694	4,530,223	4,039,016	4,076,599	3,576,760	2,999,135	2,711,924
341 UNIVERSITY OF DETROIT	451	463	348E	348	138	145	138E	138
342 UNIV OF SAN FRANCISCO	445	534	-	634	372	475	-	529
343 HAVERFORD COLLEGE	438	381	-	227	388	369	-	159
344 JAMES MADISON UNIVERSITY	425	310	-	47	332	225	-	13
345 CATHOLIC UNIV OF P R	423I	376	0E	-	296I	261	0E	-
346 CALIF ST POLY UNIV POMONA	422	69	-	47	261	42	-	45
347 SOUTHWEST TEXAS ST UNIV	414	391	-	472	220	250	-	186
348 CUNY HUNTER COLLEGE	405E	405I	-	322	379E	379I	-	281
349 ADELPHI UNIVERSITY	399	418	372	319	290	251	248	232
350 KENTUCKY STATE UNIVERSITY	398I	355	-	772	399I	355	-	772
TOTAL, 1ST 350 INSTS.	6,326,960	5,330,396	4,530,943	4,042,204	4,079,673	3,579,512	2,999,491	2,714,279

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
351 SWARTHMORE COLLEGE	393E	393	-	303	310E	310	-	269
352 DE PAUL UNIVERSITY	391	357	369	144	304	307	269	106
353 UNIV OF WIS-GREEN BAY	383	374	-	219	260	259	-	109
354 EASTERN WASHINGTON UNIV	375	357	-	160	241	195	-	64
355 SUNY ST COL OF OPTOMETRY	373E	508	48	-	62E	62	33	-
356 WILLIAMS COLLEGE	373E	345	-	354	345E	320	-	247
357 UNIV OF N C AT CHARLOTTE	372E	344	-	211	98E	91	-	93
358 REGIS COLLEGE	369	335	-	532	369	335	-	532
359 US MILITARY ACADEMY	368I	329I	-	262I	49I	43I	-	32I
360 CALIF STATE UNIV FRESNO	362E	335	-	101	36E	33	-	34
TOTAL, 1ST 360 INSTS.	6,030,719	5,334,073	4,531,360	4,044,490	4,081,746	3,581,467	2,999,793	2,715,765
361 TEXAS SOUTHERN UNIV	362I	315I	-	251	303I	269I	-	199
362 CUNY YORK COLLEGE	359E	332I	-	264I	319E	296I	-	219I
363 UNIV OF N C AT GREENSBORO	356	301	158	128	202	211	73	72
364 MOUNT HOLYOKE COLLEGE	353	263	-	147	204	185	-	68
365 SUNY COLLEGE FREDONIA	332	167	-	1,800	155	114	-	342
366 VASSAR COLLEGE	326	216	-	132	276	174	-	74
367 BRYN MAWR COLLEGE	324E	306	287	250	324E	306	287	250
368 COLUMBIA U TEACHERS COL	323	322	388	600	217	226	222	340
369 CALIF STATE UNIV CHICO	310	487	-	323	85	217	-	77
370 WESTERN KENTUCKY UNIV	309	341	-	237	193	244	-	71
TOTAL, 1ST 370 INSTS.	6,034,073	5,337,123	4,532,193	4,048,622	4,084,024	3,583,709	3,000,372	2,717,477
371 UNIV OF WIS-STEVENS POINT	307	241	-	100	170	144	-	17
372 NEW MEXICO HIGHLANDS UNIV	301	286	-	186I	275	137	-	31
373 MIDDLEBURY COLLEGE	295	144	-	35	0	117	-	12
374 SOUTHEASTERN MASS UNIV	293I	255I	-	203	252I	224I	-	166
375 COOPER UNION	280	26I	-	21	92	3I	-	2
376 GEORGE MASON UNIVERSITY	278E	264I	-	210	148E	140I	-	104
377 UNIV OF WIS-STOUT	278	362	-	266	165	194	-	197
378 WEBB INST OF NAVAL ARCH	275	229	-	168	194	166	-	120
379 BARNARD COLLEGE	265E	258	-	154	190E	186	-	101
380 COL OF THE HOLY CROSS	261	134	-	37	139	42	-	27
TOTAL, 1ST 380 INSTS.	6,036,906	5,339,322	4,532,193	4,050,002	4,085,649	3,585,062	3,000,372	2,718,223
381 WEST GEORGIA COLLEGE	258	250	-	252	47	14	-	173
382 BALL STATE UNIVERSITY	255	122I	108	228	67	86I	77	149
383 INDIANA STATE UNIVERSITY	254	162	107	300	233	134	85	64
384 GOVERNORS STATE UNIV	254	82	-	207	214	65	-	149
385 KIRKSVILLE COL OSTEO MED	235I	209I	186	191	100I	88I	73	72
386 CUNY COL S ISL ST GEORGE	230E	214	-	94I	87E	81	-	50I
387 LINCOLN UNIVERSITY (PA)	230	110	-	103	230	110	-	103
388 NEW SCH FOR SOC RESEARCH	228E	215I	191	367	222E	211I	187	334
389 UNIV OF WIS-PARKSIDE	222	113	-	118	155	93	-	79
390 DRAKE UNIVERSITY	199	199	-	192	138	137	-	67
TOTAL, 1ST 390 INSTS.	6,039,271	5,340,998	4,532,785	4,052,049	4,087,142	3,586,081	3,000,749	2,719,451
391 NORTHEAST LOUISIANA UNIV	199	230	312	455	53	46	51	97
392 FISK UNIVERSITY	197I	176I	-	140	197I	176I	-	140
393 ABILENE CHRISTIAN UNIV	196	121	-	124	0	0	-	3
394 CALIF ST UNIV FULLERTON	192	649	-	194	192	458	-	104
395 UNIV OF ALBUQUERQUE	188E	169	-	111	188E	169	-	111
396 OBERLIN COLLEGE	186I	166E	-	158	121I	108E	-	132
397 CHICAGO STATE UNIVERSITY	184I	160	-	85	179I	159	-	85
398 VIRGINIA MILITARY INST	180	98	-	55	141	77	-	49
399 CARLETON COLLEGE	176	144	-	52	127	72	-	13
400 GRINNELL COLLEGE	168I	150	-	48	19I	17	-	11
TOTAL, 1ST 400 INSTS.	6,041,137	5,343,061	4,533,09?	4,053,471	4,088,359	3,587,363	3,000,800	2,720,171

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
401 WINTHROP COLLEGE	167	183	-	89	97	67	-	59
402 CONNECTICUT COLLEGE	165E	160I	-	127	0	107I	-	79
403 HOFSTRA UNIVERSITY	164	75	88	172	123	68	84	154
404 KUTZTOWN STATE COLLEGE	159I	138I	-	110	75I	67I	-	50
405 COLORADO COLLEGE	159	124	-	46	42	40	-	27
406 NORTH CAROLINA CNTRL UNIV	158E	141	-	180	100E	89	-	129
407 NORTHERN MICHIGAN UNIV	158	203	-	57	81	90	-	23
408 WILLIAM PATERSON COLLEGE	153	144	-	70	72	76	-	33
409 PHILA COL OF PHARM & SCI	150E	144	283	136	85E	82	85	17
410 BAYLOR COL OF DENTISTRY	147	94	90	94	100	64	39	43
TOTAL, 1ST 410 INSTS.	6,342,717	5,349,467	4,533,558	4,054,552	4,089,134	3,588,113	3,001,008	2,720,785
411 SUNY COLLEGE CORTLAND	144	137	-	39	96	98	-	9
412 CLAREMONT GRADUATE SCHOOL	141E	131	557I	497	77E	71	356I	321
413 NORTHEAST MISSOURI ST U	140I	122I	-	97	97I	86I	-	64
414 GRAMBLING STATE UNIV	137	207I	-	165I	137	185I	-	137I
415 MOREHEAD STATE UNIVERSITY	137	204	-	50	32	107	-	32
416 YOUNGSTOWN ST UNIVERSITY	136I	118I	-	94	55I	49I	-	36
417 JOHN CARROLL UNIVERSITY	134	111	-	90	134	111	-	80
418 ITHACA COLLEGE	133E	119	-	111	92E	82	-	43
419 MORGAN STATE UNIVERSITY	132I	115	-	298	129I	115	-	298
420 FAIRFIELD UNIVERSITY	132I	118	-	145	54I	48	-	23
TOTAL, 1ST 420 INSTS.	6,044,083	5,345,849	4,534,115	4,056,138	4,090,037	3,589,065	3,001,364	2,721,828
421 MEHARRY MEDICAL COLLEGE	132I	117I	104	1,557	132I	117I	104	1,204
422 AUGUSTANA COLLEGE	124	64	-	36	94	64	-	29
423 ROLLINS COLLEGE	123	59I	-	47	113	0I	-	0
424 SUNY COLLEGE BROCKPORT	121E	109	-	1,349	35E	31	-	702
425 EAST TEXAS STATE UNIV	120	142	156	291	0	0	0	25
426 COLLEGE OF WOOSTER	119E	115	-	68	93E	89	-	33
427 UNIV OF NORTHERN IOWA	119I	104	-	55	108I	93	-	35
428 UNIV OF WIS-OSHKOSH	118	13	-	55	100	1	-	27
429 CALIF ST UNIV HAYWARD	113E	105	-	142	110E	101	-	119
430 TARLETON STATE UNIVERSITY	110	16	-	20	31	0	-	0
TOTAL, 1ST 430 INSTS.	6,045,282	5,346,693	4,534,375	4,059,758	4,090,853	3,589,561	3,001,468	2,724,001
431 SUL ROSS STATE UNIVERSITY	109	80	-	128	31	34	-	30
432 GOUCHER COLLEGE	107	27	-	15	46	8	-	9
433 ST JOSEPH'S UNIVERSITY	105	37	-	48	100	33	-	32
434 OKLA COL OSTEO MED & SURG	105E	103	115	-	14E	13	14	-
435 TRINITY COLLEGE	99E	98	-	86	22E	21	-	0
436 BELOIT COLLEGE	99	98	-	154	77	53	-	64
437 WALLA WALLA COLLEGE	96E	96	-	112	0	78	-	98
438 MARSHALL UNIVERSITY	96	65	39	50	82	45	9	0
439 ILLINOIS BENEDICTINE COL	96I	86E	-	86	0I	0	-	46
440 US COAST GUARD ACADEMY	92I	82I	-	65	91I	81I	-	60
TOTAL, 1ST 440 INSTS.	6,046,285	5,347,465	4,534,529	4,060,302	4,091,316	3,589,927	3,001,491	2,724,340
441 FURMAN UNIVERSITY	91E	89	-	243	53E	52	-	34
442 UNIV OF WIS-EAU CLAIRE	91	75	-	38	58	44	-	12
443 GEORGIA SOUTHERN COLLEGE	90	82	-	112	32	24	-	62
444 PACIFIC LUTHERAN UNIV	89	31	-	11	50	13	-	1
445 OKLA PANHANDLE STATE UNIV	86I	77I	-	61	0I	0I	-	0
446 LINFIELD COLLEGE	84I	75I	-	60	26I	23I	-	17
447 HENDERSON STATE UNIV	82	108	-	22	45	60	-	0
448 SUNY COLLEGE ONEONTA	77	78	-	61	31	34	-	14
449 FRANKLIN & MARSHALL COL	76E	73	-	247	0	46	-	151
450 MASS COLLEGE OF PHARMACY	75E	72	48	95	0	0	2	60
TOTAL, 1ST 450 INSTS.	6,047,126	5,348,225	4,534,577	4,061,452	4,091,611	3,590,221	3,001,493	2,724,691

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
491 ST MARY'S UNIV S ANTONIO	73	102	-	76	73	50	-	38
492 SEATTLE PACIFIC UNIV	72	591	-	47	51	571	-	42
493 AUGSBURG COLLEGE	70E	66	-	68	22E	20	-	65
494 SUNY COLLEGE OSWEGO	70	76	-	292	45	50	-	218
495 EMPORIA STATE UNIVERSITY	70	46	-	72	43	42	-	65
496 DE PAUW UNIVERSITY	69I	62I	-	69I	1I	1I	-	1I
497 SIMMONS COLLEGE	65E	6C	-	97I	54E	51	-	71I
498 AIR FORCE INST OF TECH	65	50	48E	45	65	50	48E	45
499 KEARNEY STATE COLLEGE	63E	61E	-	58	17E	16E	-	12
500 UNIVERSITY OF DALLAS	61E	55	0	-	0E	0	0	-
TOTAL, 1ST 500 INSTS.	8,047,803	5,348,862	4,534,625	4,062,256	4,091,982	3,590,560	3,001,541	2,725,248
501 ST JOSEPH COLLEGE	60	45	-	10	8	0	-	7
502 MONTCLAIR STATE COLLEGE	59	208	-	51	16	100	-	27
503 WIDENER COLLEGE	58E	58I	-	46	0	28I	-	21
504 UNIV OF WIS-RIVER FALLS	53	42	-	94	33	24	-	9
505 SOUTHERN OREGON ST COL	53	45	-	25	22	32	-	19
506 SEATTLE UNIVERSITY	50E	45E	-	43I	0	40E	-	42I
507 EASTERN MICHIGAN UNIV	50E	50I	-	40	24E	24I	-	18
508 WASHINGTON & LEE UNIV	50	103	-	55	24	32	-	31
509 PACIFIC UNION COLLEGE	49	0	-	9	35	0	-	0
510 MOORHEAD STATE UNIVERSITY	47	49	-	24	19	33	-	17
TOTAL, 1ST 510 INSTS.	8,048,331	5,349,507	4,534,625	4,062,653	4,092,163	3,590,873	3,001,541	2,725,438
511 CAL ST COL SAN BERNARDINO	46	90	-	33	17	68	-	15
512 ATHENS STATE COLLEGE	43	39	-	155	43	39	-	155
513 ST LOUIS COMMUNITY COL	40E	33	-	97	40E	33	-	97
514 CANISIUS COLLEGE	40	52	-	0	27	44	-	0
515 PACIFIC UNIVERSITY	39E	39	-	96	0	2	-	95
516 BRADLEY UNIVERSITY	39	47	-	38	36	0	-	25
517 UNIVERSITY OF PORTLAND	39E	36E	-	43	0	0	-	0
518 AUSTIN COLLEGE	38E	36	-	34	8E	6	-	6
519 LOYOLA UNIV - NEW ORLEANS	38	39	-	71E	12	7	-	29E
520 TOWSON STATE UNIVERSITY	38	11	-	46	38	11	-	0
TOTAL, 1ST 520 INSTS.	8,048,731	5,349,929	4,534,625	4,063,266	4,092,384	3,591,083	3,001,541	2,725,860
521 VALPARAISO UNIVERSITY	37	10	-	16	25	0	-	4
522 MANKATO STATE UNIVERSITY	37E	34	-	18	18E	17	-	9
523 MONMOUTH COLLEGE (NJ)	36	40	-	19	0	0	-	5
524 WESTERN ORE STATE COL	33E	30	-	44	33E	30	-	44
525 SUNY COLLEGE POTSDAM	32E	27	-	0	9E	8	-	0
526 UNIV OF WIS-WHITEWATER	31	56	-	60	0	0	-	0
527 U TENNESSEE CHATTANOOGA	30E	25I	-	20	0	7I	-	5
528 MORENS UNIVERSITY	26E	26	-	38	7E	7	-	12
529 AWRENCE UNIVERSITY	24	42	-	62	0	3	-	14
530 AKE FOREST COLLEGE	24	83	-	57	13	53	-	0
TOTAL, 1ST 530 INSTS.	8,049,041	5,350,302	4,534,625	4,063,600	4,092,489	3,591,208	3,001,541	2,725,953
531 ST CLOUD STATE UNIVERSITY	23	75	-	102	1	21	-	1
532 ST OLAF COLLEGE	22	40	-	31	20	34	-	26
533 NORTHWESTERN ST UNIV LA	21E	20	-	20	8E	7	-	19
534 BEMIDJI STATE UNIVERSITY	21E	191	-	15	10E	9I	-	7
535 EDINBORO STATE COLLEGE	20	0	-	589I	0	0	-	0I
536 UNIVERSITY OF MONTEVALLO	17	10	-	15	0	0	-	15
537 DELTA STATE UNIVERSITY	16	44	-	14	13	25	-	0
538 W VA SCHL OSTEOPATHIC MED	15E	15	0	-	0	0	0	-
539 PROVIDENCE COLLEGE	15	18	47	10	0	0	26	0
540 SUNY COLLEGE GENESEO	14	52	-	40I	2	20	-	15I
TOTAL, 1ST 540 INSTS.	8,049,225	5,350,59[illegible]	4,534,667	4,064,436	4,092,543	3,591,324	3,001,567	2,726,036

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
501 WESTERN ST COL COLORADO	11	0	-	94	0	0	-	29
502 MACALESTER COLLEGE	10E	10	-	37	10E	10	-	32
503 LORAS COLLEGE	10I	9	-	91	0I	0	-	11
504 KNOX COLLEGE	9E	7	-	38	0	3	-	33
505 NORTHWEST MISSOURI ST U	9E	9E	-	6	0E	0	-	0
506 ALBANY STATE COLLEGE	9	1171	-	93	9	1171	-	87
507 NORTHEASTERN ILL UNIV	7	32	-	20	0	7	-	7
508 PITTSBURG STATE UNIV	6	10	-	20	0	0	-	0
509 UNIV OF WIS-PLATTEVILLE	5	1	-	0	0	0	-	0
510 ST BONAVENTURE UNIVERSITY	4E	4	0	4	0E	0	0	0
TOTAL, 1ST 510 INSTS.	6,049,305	5,350,794	4,534,667	4,064,757	4,092,562	3,591,461	3,001,557	2,726,230
511 DILLARD UNIVERSITY	3	0	-	54	3	0	-	54
512 CHAPMAN COLLEGE	3	3	-	3	0	0	-	0
513 GRAND VALLEY STATE COLS	3	106	-	9	2	2	-	9
514 ANTIOCH UNIVERSITY	2E	11	-	1	2E	0I	-	0
515 MULLINS COLLEGE	2	58	-	0	0	29	-	0
516 MERCER UNIVERSITY	2E	2	7	-	0	0	0	-
517 OHIO DOMINICAN COLLEGE	2	0	-	0	0	0	-	0
518 AUGUSTANA COLLEGE	2	15E	-	15	0	0	-	0
519 MCNEESE STATE UNIVERSITY	1	20	-	212	0	18	-	210
520 OLIVET NAZARENE COLLEGE	0	0E	-	0	0	0E	-	0
TOTAL, 1ST 520 INSTS.	6,049,325	5,350,999	4,534,674	4,065,053	4,092,569	3,591,510	3,001,557	2,726,503
521 MISS UNIVERSITY FOR WOMEN	0	0	-	0E	0	0	-	0
522 EAST STROUDSBURG ST COL	0	0	-	0E	0	0	-	0
523 PRATT INSTITUTE	0	4	-	55	0	0	-	42
524 HARTFORD GRADUATE CENTER	0	9	-	141	0	0	-	0
525 MILWAUKEE AREA TECH COL	0	0	-	0	0	0	-	0
526 CENTRAL STATE UNIV (OK)	0	0	-	0	0	0	-	0
527 NEW ENGLAND INSTITUTE	0E	0E	-	0	0E	0E	-	0
528 UNIVERSITY OF PUGET SOUND	0	47E	-	45	0	0	-	13
529 BIOLA COLLEGE	0	0	0	-	0	0	0	-
530 ST MARY'S COLLEGE	0	33	-	54	0	32	-	41
TOTAL, 1ST 530 INSTS.	6,049,325	5,351,092	4,534,674	4,065,348	4,092,569	3,591,542	3,001,557	2,726,599
531 CONCORDIA COL MOORHEAD	0	0	-	8	0	0	-	8
532 ROOSEVELT UNIVERSITY	0	3821	-	304	0	2391	-	177
533 WAUKESHA COUNTY TECH INST	0	0I	-	0	0	0I	-	0
534 COL OSTEO MED OF PACIFIC	0E	0F	0E	-	0E	0E	0E	-
535 ORAL ROBERTS UNIVERSITY	0E	0E	-	-	0	0	-	-
536 BRIDGEWATER STATE COLLEGE	0	0E	-	0	0	0E	-	0
537 US INTERNATIONAL UNIV	0	0E	0	0	0	0E	0	0
538 SLIPPERY ROCK STATE COL	0	0	-	3	0	0	-	3
539 UNIV OF HEALTH SCIENCES	0	0	0	-	0	0	0	-
540 CALIFORNIA STATE COLLEGE	0	0	-	14	0	0	-	5
TOTAL, 1ST 540 INSTS.	6,049,325	5,351,474	4,534,674	4,065,677	4,092,569	3,591,781	3,001,557	2,726,792
541 DREW POST-GRAD MED SCHOOL	0	0	0I	0I	0	0	0I	0I
542 CAL SCH PROF PSYCH-BERKLY	0	0E	0	-	0	0E	0	-
543 HUMBOLDT STATE UNIVERSITY	0	0	-	374	0	0	-	303
544 CAL SCH PROF PSYCH-L A	0	0	0	-	0	0	0	-
545 EASTERN VA MEDICAL SCHOOL	0	0	0	-	0	0	0	-
546 RAND GRAD INST POL STDIES	0	0	0	-	0	0	0	-
547 UNION OF EXPER COL & UNIV	0	0	0	-	0	0	0	-
548 CAL SCH PROF PSYCH-S D	0	21	10	-	0	0	0	-
549 CLARION STATE COLLEGE	0	33	-	380	0	20	-	6
550 MISS VALLEY STATE UNIV	0E	0	-	16	0	0	-	16
TOTAL, 1ST 550 INSTS.	6,049,325	5,351,528	4,534,684	4,066,447	4,092,569	3,591,801	3,001,557	2,727,117

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1980)	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
551 UNIV OF NORTHERN COLORADO	0	0	0	-	0	0	0	-
552 UNIV HOUSTN CLR LAKE CITY	0	59	-	86	0	35	-	55
553 CAL SCH PROF PSYCH-FRESNO	0	0	3	-	0	0	0	-
554 QUINNIPIAC COLLEGE	0	0	-	54	0	0	-	46
555 JOHN F KENNEDY UNIVERSITY	0	0	-	0	0	0	-	0
556 COL OF OSTEO MED & SURG	0	0	0	20	0	0	0	0
557 PHILA COL OSTEOPATHIC MED	0	0I	0E	-	0	0I	0E	-
558 SUNY COLLEGE PLATTSBURGH	0	0	-	700I	0	0	-	356I
559 FIELDING INSTITUTE	0	0	-	-	0	0	-	-
560 WEST CHESTER STATE COL	0	0	-	30I	0	0	-	5I
TOTAL, 1ST 560 INSTS.	6,049,325	5,351,587	4,534,687	4,067,337	4,092,569	3,591,836	3,001,567	2,727,579
561 FULLER THEOLOGICAL SEM	0	0	0	-	0	0	0	-
562 ARKANSAS STATE UNIVERSITY	0	152	-	146	0	24	-	78
563 STETSON UNIVERSITY	0	0	-	0	0	0	-	0
TOTAL, 1ST 563 INSTS.	6,049,325	5,351,739	4,534,687	4,067,483	4,092,569	3,591,860	3,001,567	2,727,657
TOTAL, ALL OTHER INSTS.	0	2,699	86,604	2,364	0	2,526	55,591	2,098

1/ INCLUDES APPLIED PHYSICS LABORATORY WITH $170 MILLION IN TOTAL AND $167 MILLION IN FEDERALLY FINANCED R&D EXPENDITURES.

2/ DOES NOT INCLUDE R&D EXPENDITURES AT UNIVERSITY ASSOCIATED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFRDC'S). SEE TABLE B-52.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-15. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1980

DOCTORATE-GRANTING INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	5,952,023	4,029,218	483,092	230,992	807,552	401,239
1 JOHNS HOPKINS UNIVERSITY	253,204	239,855	3,131	0	1,306	8,912
2 MASS INST OF TECHNOLOGY	163,566	138,400	826	11,402	874	12,064
3 UNIV OF WIS-MADISON	138,227	89,350	24,883	2,615	14,112	7,267
4 UNIV OF CAL SAN DIEGO	124,830	111,038	648	0	6,176	6,968
5 UNIVERSITY OF MINNESOTA	119,065	68,463	12,847	4,352	24,226	9,177
6 STANFORD UNIVERSITY	113,120	102,645	165	3,215	2,124	4,971
7 UNIVERSITY OF WASHINGTON	111,858	93,109	5,191	3,830	334	9,394
8 UNIVERSITY OF MICHIGAN	111,316	75,549	1,535	6,145	23,231	4,856
9 CORNELL UNIVERSITY	107,611	70,583	19,095	5,153	5,364	7,416
10 COLUMBIA UNIV MAIN DIV	101,407	83,729	167	364	3,681	13,466
TOTAL, 1ST 10 INSTS.	1,344,204	1,072,721	68,488	37,076	81,428	84,491
11 HARVARD UNIVERSITY	100,901E	76,377	280E	3,995E	6,386E	13,953E
12 UNIV OF PENNSYLVANIA	94,198	70,553	882	2,010	9,253	11,500
13 UNIV OF CAL BERKELEY	90,377	64,127	2,474	0	18,405	5,371
14 UNIV OF CAL LOS ANGELES	88,934	70,365	192	0	7,163	11,214
15 UNIV OF ILL URBANA	83,274	52,327	4,801	3,404	21,095	1,647
16 UNIV OF TEXAS AT AUSTIN	78,621	48,666	4,280	1,237	17,082	7,356
17 UNIV OF SOUTHERN CAL	74,304	50,001	2,777	7,462	11,545	2,519
18 UNIV OF CAL SAN FRANCISCO	73,426	61,172	665	0	4,470	7,119
19 MICHIGAN STATE UNIVERSITY	72,354	34,830	15,086	2,543	15,330	4,565
20 PENNSYLVANIA STATE UNIV	71,840	45,001	1,647	7,842	16,900	450
TOTAL, 1ST 20 INSTS.	2,172,433	1,646,140	101,572	65,569	209,057	150,095
21 TEXAS A & M UNIVERSITY	71,461	31,860	29,355	4,281	1,796	4,169
22 YALE UNIVERSITY	71,446	63,572	1,757	582	4,594	941
23 OHIO STATE UNIVERSITY	70,652	40,555	13,092	3,699	5,236	8,070
24 UNIVERSITY OF ARIZONA	69,095	35,559	13,859	5,923	9,200	4,554
25 UNIV OF CAL DAVIS	68,429	35,078	3,581	0	24,798	4,972E
26 UNIVERSITY OF ROCHESTER	65,845	43,890	1,137	7,869	8,588	4,351
27 UNIVERSITY OF COLORADO	62,056	48,632	65	2,674	4,527	6,158
28 PURDUE UNIVERSITY	61,765	38,041	7,712	4,756	10,015	1,241
29 WASHINGTON UNIVERSITY	59,379	47,756	570	1,029	3,770	6,254
30 UNIVERSITY OF CHICAGO	58,436	50,118	239	402	4,502	3,175
TOTAL, 1ST 30 INSTS.	2,830,997	2,081,201	172,939	96,784	296,083	193,990
31 NEW YORK UNIVERSITY	56,739	43,705	1,145	2,060	3,070	6,739
32 UNIVERSITY OF FLORIDA	56,656E	23,627E	6,814E	3,045E	13,581E	9,589E
33 GEORGIA INSTITUTE OF TECH	56,653	32,827	2,033	6,243	15,550	0
34 UNIVERSITY OF GEORGIA	55,595	17,953	809	2,076	34,311	446
35 LOUISIANA STATE UNIV	53,058	15,868	20,829	1,267	12,382	2,712
36 IOWA ST U OF SCI & TECH	49,459	16,819	14,032	1,856	15,044	1,710
37 OREGON STATE UNIVERSITY	44,713	24,669	13,748	1,572	1,651	3,073
38 UNIVERSITY OF CONNECTICUT	44,248	27,510	1,154	959	11,064	3,561
39 CALIFORNIA INST OF TECH	43,259	38,330	320	1,993	71	2,545
40 N C STATE UNIV AT RALEIGH	42,725	15,611	20,463	1,800	3,872	979
TOTAL, 1ST 40 INSTS.	3,334,102	2,338,120	254,286	119,673	396,679	225,344
41 YESHIVA UNIVERSITY	42,686	31,540	0	0	5,000	6,126
42 NORTHWESTERN UNIVERSITY	42,417	31,971	252	290	6,141	3,953
43 UNIV OF ALASKA FAIRBANKS	42,154	26,587	1,383	830	10,731	2,523
44 UNIVERSITY OF MIAMI	41,450	29,268	142	1,895	6,743	3,402
45 CASE WESTERN RESERVE UNIV	40,688	29,721	547	1,790	3,955	4,675
46 COLORADO STATE UNIVERSITY	40,678	28,488	6,457	2,505	2,893	335
47 UNIV OF HAWAII-MANOA	40,593	25,833	12,399	184	1,446	731
48 UNIV OF MD COLLEGE PARK	39,917	23,174	8,507	2,263	5,973	0
49 DUKE UNIVERSITY	39,066	36,165	502	779	291	1,329
50 UNIV OF NC AT CHAPEL HILL	38,924	31,580	1,932	1,370	1,565	2,477
TOTAL, 1ST 50 INSTS.	3,742,855	2,632,447	286,407	131,679	441,417	251,035

SEE FOOTNOTES AT END OF TABLE.

TABLE B-19. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1980

- CONTINUED

DOCTORATE-GRANTING INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 UNIVERSITY OF IOWA	39,866	33,603	38	1,095	2,714	1,416
52 ROCKEFELLER UNIVERSITY	38,089	19,290	179	678	12,996	4,946
53 BAYLOR COL OF MEDICINE	37,908	31,211	0	2,801	836E	[illegible]
54 UNIVERSITY OF UTAH	37,175	31,588	1,029	851	2,430	1,277
55 RUTGERS THE ST UNIV OF NJ	36,335	16,159	7,195	1,008	10,876	1,097
56 UNIV OF TEX CANCER CENTER	34,920	18,471	0	0	12,932	3,517
57 UNIV OF MISSOURI COLUMBIA	34,620	13,603	8,630	509	9,801	2,077
58 VA POLYTECH INST & ST U	33,604	16,380	10,546	3,692	2,986	0
59 UNIV OF NEBRASKA-LINCOLN	32,607	10,380	840	996	19,640	751
60 UNIVERSITY OF PITTSBURGH	31,863	23,327	325	774	4,481	2,956
TOTAL, 1ST 50 INSTS.	4,098,842	2,846,459	315,189	143,983	521,109	272,102
61 WASHINGTON STATE UNIV	31,538	11,855	14,759	795	3,129	1,000
62 UNIV ALABAMA BIRMINGHAM	30,959	25,171	113	1,585	479	3,611
63 INDIANA UNIV	30,307	22,278	751	831	3,963	2,484
64 UNIVERSITY OF KENTUCKY	30,013	13,093	4,832	312	11,776	0
65 CARNEGIE-MELLON UNIV	29,308	19,645	128	5,010	682	3,843
66 WOODS HOLE OCNGRPHIC INST	29,209	25,042	8	155	1,033	2,971
67 MISSISSIPPI STATE UNIV	29,035	8,824	11,583	459	6,846	1,324E
68 UNIVERSITY OF CINCINNATI	28,991	16,041	184	1,237	5,253	6,276
69 PRINCETON UNIVERSITY	27,821	20,895	0	423	4,799	1,704
70 KANS ST U - AG & APP SCI	27,793	8,677	11,502	1,101	4,842	1,671
TOTAL, 1ST 70 INSTS.	4,393,816	3,017,980	359,049	155,890	563,911	296,986
71 UNIVERSITY OF VIRGINIA	27,297	23,606	462	984	1,097	1,148
72 CUNY MT SINAI SCH OF MED	26,718	21,182	148	554	866	3,968
73 U TEX HLTH SCI CTR DALLAS	26,586	20,871	686	1,319	75	3,635
74 SUNY AT STONY BROOK	26,183	18,460	906	565	4,336	1,916
75 NEW MEXICO STATE UNIV	25,618	21,718	890	0	88	2,922
76 UNIV OF CAL RIVERSIDE	24,961	8,862	1,611	0	13,008	1,480E
77 UTAH STATE UNIVERSITY	24,611	14,819	5,454	533	2,466	1,339
78 BOSTON UNIVERSITY	24,393	22,238	530	241	38	1,346
79 UNIVERSITY OF NEW MEXICO	24,242	19,024	859	2,822	1,488	49
80 SUNY AT BUFFALO	23,437	15,664	264	0	5,877	1,632
TOTAL, 1ST 80 INSTS.	4,647,862	3,204,424	370,859	162,908	593,250	315,421
81 OKLAHOMA STATE UNIVERSITY	23,417	11,107	2,608	2,224	7,478	0
82 UNIV OF CAL IRVINE	23,303	20,211	303	0	681	2,108
83 FLORIDA STATE UNIVERSITY	21,497	8,501	1,207	247	11,052	490
84 UNIV OF ARK FAYETTEVILLE	21,126	2,902	892	1,186	15,735	411
85 WAYNE STATE UNIVERSITY	20,818	12,196	265	1,604	4,966	1,787
86 VANDERBILT UNIVERSITY	20,570	16,498	429	1,890	771	982
87 AUBURN UNIVERSITY	20,248	6,969	7,132	530	5,220	397
88 UNIVERSITY OF KANSAS	19,869	16,676	2,000E	0	1,000E	193E
89 UNIVERSITY OF DAYTON	19,678	17,988	44	1,257	348E	41
90 GEORGE WASHINGTON UNIV	18,961	16,780	0	359	1,081	741
TOTAL, 1ST 90 INSTS.	4,857,349	3,334,252	385,739	172,205	641,582	323,571
91 TEMPLE UNIVERSITY	18,613	13,686	195	185	2,026	2,521
92 CLEMSON UNIVERSITY	18,366	5,847	8,761	1,126	2,204	428
93 VIRGINIA COMMONWLTH UNIV	18,119	14,675	302	143	1,590	1,409
94 OKUMA UNIVERSITY	17,950	15,375	50	650	1,875	0
95 WEST VIRGINIA UNIVERSITY	17,510	9,225	6,590	519	263	913
96 GEORGETOWN UNIVERSITY	17,502	9,558	32	1,535	2,319	4,058
97 UNIV OF RHODE ISLAND	16,932E	13,847	3,085I	0	0	0
98 UNIVERSITY OF DELAWARE	16,746	9,180	467	702	5,419	978
99 UNIV OF MASS AT AMHERST	16,624	9,871	1,935	413	4,124	231
100 SYRACUSE UNIVERSITY	16,517	8,626	921	213	6,662	95
TOTAL, 1ST 100 INSTS.	5,032,228	3,444,142	408,077	177,691	668,064	334,254
TOTAL, ALL OTHER INSTS.	919,795	585,076	74,975	53,301	139,488	66,955

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-15. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1980
- CONTINUED

MASTER'S-GRANTING INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	74,724	45,861	7,997	3,923	12,055	4,888
1 NC AG & TECH STATE UNIV	4,969	4,888E	56E	0	0	25E
2 UNIV OF WEST FLORIDA	4,333	1,967	596	89	1,647	34
3 FLORIDA A & M UNIVERSITY	2,739I	2,548I	0	191I	0	0
4 GALLAUDET COLLEGE	2,589E	0	0	0	2,589I	0
5 UNIVERSITY OF GUAM	2,114	1,100	990	24	0	0
6 VIRGINIA STATE UNIVERSITY	1,913	1,904	0	0	9	0
7 SOUTHERN U & A&M COLLEGE	1,875	1,875	0	0	0	0
8 CALIF ST COL STANISLAUS	1,773	89	0	0	0	1,684
9 SAN JOSE STATE UNIVERSITY	1,762I	1,289I	14I	102I	0	357I
10 ROCHESTER INST TECHNOLOGY	1,701	521	26	14	1,131	9
TOTAL, 1ST 10 INSTS.	25,768	16,181	1,682	420	5,376	2,109
11 MONT COL MINRL SCI & TECH	1,679	1,614	14	46	0	0
12 CUNY QUEENS COLLEGE	1,471	874	0	11	368	218
13 UNIVERSITY OF REDLANDS	1,446I	30I	0	0	1,416I	0
14 CUNY BROOKLYN COLLEGE	1,428I	959I	0	0	469I	0
15 PRAIRIE VIEW A & M UNIV	1,381E	1,349E	20I	0	0	12I
16 FAIRLEIGH DICKINSON UNIV	1,356	878	14	323	0	141
17 SUNY COLLEGE BUFFALO	1,337I	1,308I	11I	3I	9I	5I
18 ALABAMA A & M UNIVERSITY	1,313	1,308	0	5	0	0
19 CALIF ST UNIV LOS ANGELES	1,268E	1,107	17	54	62E	28
20 SUNY COLLEGE NEW PALTZ	1,201I	596I	555I	0	0	50I
TOTAL, 1ST 20 INSTS.	39,643	26,204	2,313	862	7,700	2,564
21 MURRAY STATE UNIVERSITY	1,166I	44I	1,052I	0	28I	42I
22 SAN FRANCISCO STATE UNIV	1,100	972	22	26	38	42
23 CENTRAL WASHINGTON UNIV	1,013	74	480	0	459	0
24 JACKSON STATE UNIVERSITY	996	818	32	56	18	72
25 MANHATTAN COLLEGE	961	851	0	0	71	19
26 OCCIDENTAL COLLEGE	922	218	0	704	0	0
27 UNIV OF MASS BOSTON	922E	654E	42I	0	86I	140I
28 WESTERN WASHINGTON UNIV	915	743	22	51	99	0
29 CALIF ST U LONG BEACH FDN	914	595	37	248	34	0
30 UNIVERSITY OF D C	848I	829I	7I	2I	6I	4I
TOTAL, 1ST 30 INSTS.	49,380	32,002	4,007	1,949	8,539	2,883
31 S ILLINOIS U EDWARDSVILLE	829	302	360	92	75	0
32 HARVEY MUDD COLLEGE	748	418	0	317	23	0
33 TRINITY UNIVERSITY	687	526	11	0	96	54
34 WESTERN ILLINOIS UNIV	682	178	267	37	143	57
35 UNIV OF NEVADA LAS VEGAS	679	564E	104E	0	11E	0
36 TENNESSEE STATE UNIV	670E	0	250I	67I	222I	131I
37 EASTERN NEW MEXICO UNIV	669E	238E	321E	25E	60E	25E
38 TUSKEGEE INSTITUTE	631	615	0	16	0	0
39 UNIV OF WIS-LA CROSSE	589	277	186	28	60	38
40 CAL POLY ST U SAN LUIS OB	575E	575E	0	0	0	0
TOTAL, 1ST 40 INSTS.	56,139	35,695	5,506	2,521	9,229	3,188
41 CUNY BERNARD BARUCH COL	563I	141I	0	189I	106I	127I
42 UNIV OF WIS-SUPERIOR	550	420	19	0	110	1
43 WEST TEXAS STATE UNIV	525	62	36	19	386E	19
44 XAVIER UNIVERSITY	509	177	7[illegible]	19	7	233
45 PAN AMERICAN UNIVERSITY	502	477	25	0	0	0
46 SOUTHWEST MISSOURI ST U	502	14	35[illegible]	0	134	0
47 BUCKNELL UNIVERSITY	486	341	[illegible]	1	63	79
48 UNIV OF SAN FRANCISCO	445	372	15	35	5	18
49 JAMES MADISON UNIVERSITY	425	332	57	7	0	29
50 CALIF ST POLY UNIV POMONA	422	261	0	161	0	0
TOTAL, 1ST 50 INSTS.	61,068	38,292	6,090	2,952	10,040	3,694
TOTAL, ALL OTHER INSTS.	13,656	7,569	1,907	971	2,015	1,194

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-19. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1980

- CONTINUED

OTHER INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	22,578	17,490	1,261	596	1,333	1,898
1 UNIV OF ARK PINE BLUFF	3,564	2,106	1,052	183	203	20
2 KENTUCKY INST OF TECH	2,108	2,088	5	0	6	9
3 WELLESLEY COLLEGE	1,472	622	0	0	0	850
4 US NAVAL ACADEMY	1,217I	1,217I	0	0	0	0
5 U OF MD EASTERN SHORE	1,024I	1,024I	0	0	0	0
6 POMONA COLLEGE	969E	886E	0	0	0	83
7 AMHERST COLLEGE	853	789	0	0	64	0
8 US AIR FORCE ACADEMY	851	851	0	0	0	0
9 ALCORN STATE UNIVERSITY	839I	839I	0	0	0	0
10 EMMANUEL COLLEGE	731	728	0	0	3	0
TOTAL, 1ST 10 INSTS.	13,628	11,150	1,057	183	276	962
11 COL OF THE VIRGIN ISLANDS	693I	596I	87I	0	10I	0
12 REED COLLEGE	60I	57D	2	0	4	32
13 DENISON UNIVERSITY	605E	276E	0	0	29E	300E
14 NORFOLK STATE UNIVERSITY	580	580	0	0	0	0
15 BOWDOIN COLLEGE	563	195	54	70	126	118
16 SOUTH CAROLINA ST COLLEGE	508E	508E	0	0	0	0
17 HAVERFORD COLLEGE	438	388	0	0	3	47
18 KENTUCKY STATE UNIVERSITY	398I	398I	0	0	0	0
19 REGIS COLLEGE	369	369	0	0	0	0
20 US MILITARY ACADEMY	368I	48I	0	0	320I	0
TOTAL, 1ST 20 INSTS.	18,758	15,078	1,200	253	768	1,459
21 CUNY YORK COLLEGE	359E	319E	23I	0	5I	12I
22 WEBB INST OF NAVAL ARCH	275	194	0	8I	0	0
23 BARNARD COLLEGE	265E	190E	0	27E	40E	8E
24 LINCOLN UNIVERSITY (PA)	230	230	0	0	0	0
25 UNIV OF WIS-PARKSIDE	222	155	0	21	45	1
26 UNIV OF ALBUQUERQUE	188E	188E	0	0	0	0
27 VIRGINIA MILITARY INST	180	141	0	31	0	8
28 CARLETON COLLEGE	176	127	0	49	0	0
29 GRINNELL COLLEGE	168I	19I	0	7I	57I	85I
30 COLORADO COLLEGE	159	42	1	2	20	94
TOTAL, 1ST 30 INSTS.	20,980	16,683	1,224	471	935	1,667
31 FAIRFIELD UNIVERSITY	132I	54I	1I	0	77I	0
32 AUGUSTANA COLLEGE	124	94	0	25	5	0
33 COLLEGE OF WOOSTER	119E	93E	0	20E	5E	1E
34 GOUCHER COLLEGE	107	46	0	0	61	0
35 BELOIT COLLEGE	98	77	4	5	8	4
36 ILLINOIS BENEDICTINE COL	96I	0I	0	3I	93I	0
37 US COAST GUARD ACADEMY	92I	91I	0	0	1I	0
38 OKLA PANHANDLE STATE UNIV	86I	0I	0	39I	0	47I
39 LINFIELD COLLEGE	84I	26I	0	5I	28I	25I
40 FRANKLIN & MARSHALL COL	76E	0	0	14I	62I	0
TOTAL, 1ST 40 INSTS.	21,994	17,164	1,229	582	1,275	1,744
41 SEATTLE PACIFIC UNIV	72	51	0	0	0	21
42 AUGSBURG COLLEGE	70E	22E	0	0	0	48I
43 SIMMONS COLLEGE	65E	54E	0	0	6E	5E
44 UNIVERSITY OF DALLAS	60E	0E	0	0	20E	40E
45 WASHINGTON & LEE UNIV	50	24	3	0	23	0
46 ATHENS STATE COLLEGE	43	43	0	0	0	0
47 S. LOUIS COMMUNITY COL	40E	40E	0	0	0	0
48 CANISIUS COLLEGE	40	27	0	13	0	0
49 AUSTIN COLLEGE	38E	8E	0	0	0	30E
50 LAWRENCE UNIVERSITY	24	0	16	0	0	8
TOTAL, 1ST 50 INSTS.	22,496	17,433	1,248	595	1,324	1,896
TOTAL, ALL OTHER INSTS.	82	57	13	1	9	2

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-16. -- RED EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY SOURCE OF FUNDS: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	6,049,325	4,092,569	492,310	235,511	820,940	407,995
1 JOHNS HOPKINS UNIVERSITY	253,204	239,855	3,131	0	1,306	9,912
2 MASS INST OF TECHNOLOGY	163,566	138,400	826	11,402	874	12,064
3 UNIV OF WIS-MADISON	138,227	89,350	24,883	2,615	14,112	7,257
4 UNIV OF CAL SAN DIEGO	124,830	111,038	648	0	6,176	6,958
5 UNIVERSITY OF MINNESOTA	119,065	68,463	17,847	4,352	24,226	9,177
6 STANFORD UNIVERSITY	113,120	102,645	165	3,215	2,124	4,971
7 UNIVERSITY OF WASHINGTON	111,858	93,109	5,191	3,830	334	9,394
8 UNIVERSITY OF MICHIGAN	111,316	75,549	1,535	6,145	23,231	4,856
9 CORNELL UNIVERSITY	107,611	70,583	19,095	5,153	5,364	7,416
10 COLUMBIA UNIV MAIN DIV	101,407	83,729	167	364	3,681	13,455
TOTAL, 1ST 10 INSTS.	1,344,204	1,072,721	68,488	37,076	81,428	84,491
11 HARVARD UNIVERSITY	100,901E	76,377	280E	3,995E	6,386E	13,853E
12 UNIV OF PENNSYLVANIA	94,198	70,553	882	2,010	9,253	11,500
13 UNIV OF CAL BERKELEY	90,377	64,127	2,474	0	18,405	5,371
14 UNIV OF CAL LOS ANGELES	88,934	70,365	192	0	7,163	11,214
15 UNIV OF ILL URBANA	83,274	52,327	4,801	3,404	21,095	1,647
16 UNIV OF TEXAS AT AUSTIN	78,621	48,666	4,280	1,237	17,082	7,356
17 UNIV OF SOUTHERN CAL	74,304	50,001	2,777	7,462	11,545	2,519
18 UNIV OF CAL SAN FRANCISCO	73,426	61,172	665	0	4,470	7,119
19 MICHIGAN STATE UNIVERSITY	72,354	34,830	15,086	2,543	15,330	4,565
20 PENNSYLVANIA STATE UNIV	71,840	45,001	1,647	7,842	16,900	450
TOTAL, 1ST 20 INSTS.	2,172,433	1,646,140	101,572	65,569	209,057	150,095
21 TEXAS A & M UNIVERSITY	71,461	31,860	29,355	4,281	1,796	4,159
22 YALE UNIVERSITY	71,446	63,572	1,757	582	4,594	941
23 OHIO STATE UNIVERSITY	70,652	40,595	13,092	3,699	5,236	9,070
24 UNIVERSITY OF ARIZONA	69,095	35,559	13,855	5,923	9,200	4,554
25 UNIV OF CAL DAVIS	68,429	35,078	3,581	0	24,798	4,972E
26 UNIVERSITY OF ROCHESTER	65,865	43,890	1,137	7,869	8,588	4,351
27 UNIVERSITY OF COLORADO	62,056	48,632	65	2,674	4,527	6,158
28 PURDUE UNIVERSITY	61,765	38,041	7,712	4,756	10,015	1,241
29 WASHINGTON UNIVERSITY	59,379	47,756	570	1,029	3,770	6,254
30 UNIVERSITY OF CHICAGO	58,436	50,118	239	402	4,502	3,175
TOTAL, 1ST 30 INSTS.	2,830,997	2,081,201	172,939	96,784	286,083	193,990
31 NEW YORK UNIVERSITY	56,739	43,705	1,145	2,080	3,070	6,739
32 UNIVERSITY OF FLORIDA	56,656E	23,627E	6,814E	3,045E	13,581E	9,589E
33 GEORGIA INSTITUTE OF TECH	56,653	32,827	2,033	6,243	15,550	0
34 UNIVERSITY OF GEORGIA	55,595	17,953	809	2,076	34,311	446
35 LOUISIANA STATE UNIV	53,058	15,868	20,829	1,267	12,382	2,712
36 IOWA ST U OF SCI & TECH	49,459	16,819	14,032	1,854	15,044	1,710
37 OREGON STATE UNIVERSITY	44,713	24,669	13,748	1,572	1,651	3,073
38 UNIVERSITY OF CONNECTICUT	44,248	27,510	1,154	959	11,064	3,551
39 CALIFORNIA INST OF TECH	43,259	38,330	320	1,993	71	2,545
40 N C STATE UNIV AT RALEIGH	42,725	15,611	20,463	1,800	3,872	979
TOTAL, 1ST 40 INSTS.	3,334,102	2,338,120	254,286	119,673	398,679	225,344
41 YESHIVA UNIVERSITY	42,666	31,540	0	0	5,000	6,126
42 NORTHWESTERN UNIVERSITY	42,617	31,971	252	290	6,141	3,953
43 UNIV OF ALASKA FAIRBANKS	42,154	26,587	1,383	830	10,731	2,623
44 UNIVERSITY OF MIAMI	41,450	29,268	142	1,895	6,743	3,402
45 CASE WESTERN RESERVE UNIV	40,688	29,721	547	1,790	3,955	4,575
46 COLORADO STATE UNIVERSITY	40,678	28,488	6,457	2,505	2,893	335
47 UNIV OF HAWAII-MANOA	40,593	25,833	12,399	184	1,446	731
48 UNIV OF MD COLLEGE PARK	39,917	23,174	8,507	2,263	5,973	0
49 DUKE UNIVERSITY	39,066	36,165	502	779	291	1,329
50 UNIV OF NC AT CHAPEL HILL	38,924	31,580	1,932	1,370	1,565	2,477
TOTAL, 1ST 50 INSTS.	3,742,855	2,632,447	286,407	131,579	441,417	251,005

SEE FOOTNOTES AT END OF TABLE.

TABLE B-16. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1980 - CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 UNIVERSITY OF IOWA	39,866	33,603	38	1,095	2,714	1,416
52 ROCKEFELLER UNIVERSITY	38,089	19,290	179	678	12,996	4,946
53 BAYLOR COL OF MEDICINE	37,908	31,511	0	2,801	836E	3,060
54 UNIVERSITY OF UTAH	37,175	31,598	1,029	851	2,430	1,277
55 RUTGERS THE ST UNIV OF NJ	36,335	16,159	7,195	1,008	10,876	1,097
56 UNIV OF TEX CANCER CENTER	34,920	18,471	0	0	12,932	3,517
57 UNIV OF MISSOURI COLUMBIA	34,620	13,603	8,630	509	9,801	2,077
58 VA POLYTECH INST & ST U	33,604	16,380	10,546	3,692	2,986	0
59 UNIV OF NEBRASKA-LINCOLN	32,607	10,380	840	996	19,640	751
60 UNIVERSITY OF PITTSBURGH	31,863	23,327	325	774	4,481	2,956
TOTAL, 1ST 60 INSTS.	4,099,842	2,846,459	315,189	143,983	521,109	272,102
61 WASHINGTON STATE UNIV	31,538	11,855	14,759	795	3,129	1,000
62 UNIV ALABAMA BIRMINGHAM	30,959	25,171	113	1,585	479	3,611
63 INDIANA UNIV	30,307	22,278	751	831	3,963	2,484
64 UNIVERSITY OF KENTUCKY	30,013	13,093	4,832	312	11,776	0
65 CARNEGIE-MELLON UNIV	29,308	19,645	128	5,010	682	3,843
66 WOODS HOLE OCNGRPHIC INST	29,209	25,042	8	155	1,033	2,971
67 MISSISSIPPI STATE UNIV	29,035	8,824	11,583	458	6,846	1,324E
68 UNIVERSITY OF CINCINNATI	28,991	16,041	184	1,237	5,253	6,276
69 PRINCETON UNIVERSITY	27,821	20,895	0	423	4,799	1,704
70 KANS ST U - AG & APP SCI	27,793	8,677	11,502	1,101	4,842	1,671
TOTAL, 1ST 70 INSTS.	4,393,816	3,017,980	359,519	155,890	563,911	296,986
71 UNIVERSITY OF VIRGINIA	27,297	23,606	462	984	1,097	1,148
72 CUNY MT SINAI SCH OF MED	26,718	21,182	148	554	866	3,968
73 U TEX HLTH SCI CTR DALLAS	26,586	20,871	686	1,319	75	3,635
74 SUNY AT STONY BROOK	26,183	18,460	906	565	4,336	1,916
75 NEW MEXICO STATE UNIV	25,618	21,718	890	0	88	2,922
76 UNIV OF CAL RIVERSIDE	24,961	8,862	1,611	0	13,008	1,480E
77 UTAH STATE UNIVERSITY	24,611	14,819	5,454	533	2,466	1,339
78 BOSTON UNIVERSITY	24,393	22,238	530	241	38	1,346
79 UNIVERSITY OF NEW MEXICO	24,242	19,024	859	2,822	1,488	49
80 SUNY AT BUFFALO	23,437	15,664	264	0	5,877	1,632
TOTAL, 1ST 80 INSTS.	4,647,862	3,204,424	370,859	162,908	593,250	316,421
81 OKLAHOMA STATE UNIVERSITY	23,417	11,107	2,608	2,224	7,478	0
82 UNIV OF CAL IRVINE	23,303	20,211	303	0	681	2,108
83 FLORIDA STATE UNIVERSITY	21,497	8,501	1,207	247	11,052	490
84 UNIV OF ARK FAYETTEVILLE	21,126	2,902	892	1,186	15,735	411
85 WAYNE STATE UNIVERSITY	20,818	12,196	265	1,604	4,966	1,787
86 VANDERBILT UNIVERSITY	20,570	16,498	429	1,890	771	982
87 AUBURN UNIVERSITY	20,248	6,969	7,132	530	5,220	397
88 UNIVERSITY OF KANSAS	19,869	16,676	2,000E	0	1,000E	193E
89 UNIVERSITY OF DAYTON	19,678	17,988	44	1,257	348E	41
90 GEORGE WASHINGTON UNIV	18,951	16,780	0	359	1,081	741
TOTAL, 1ST 90 INSTS.	4,857,349	3,334,232	385,739	172,205	641,582	323,571
91 TEMPLE UNIVERSITY	18,613	13,686	195	185	2,026	2,521
92 CLEMSON UNIVERSITY	18,366	5,847	8,761	1,126	2,204	428
93 VIRGINIA COMMONWLTH UNIV	18,119	14,675	302	143	1,590	1,409
94 BRUWN UNIVERSITY	17,950	15,375	50	650	1,875	0
95 WEST VIRGINIA UNIVERSITY	17,510	9,225	6,590	519	263	913
96 GEORGETOWN UNIVERSITY	17,502	9,558	32	1,555	2,319	4,038
97 UNIV OF RHODE ISLAND	16,932E	13,847	3,085I	0	0	0
98 UNIVERSITY OF DELAWARE	16,746	9,180	467	702	5,419	978
99 UNIV OF MASS AT AMHERST	16,624	9,871	1,935	413	4,124	281
100 SYRACUSE UNIVERSITY	16,517	8,626	921	213	6,662	95
TOTAL, 1ST 100 INSTS.	5,032,228	3,444,142	408,077	177,691	668,064	334,254

SEE FOOTNOTES AT END OF TABLE.

TABLE B-16. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY SOURCE OF FUNDS: FISCAL YEAR 1980
- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
101 U TEX MED BRNCH GALVESTON	16,041	10,387	818	467	2,784	1,585
102 UNIV OF OKLAHOMA NORMAN	15,805	7,634	678	509	6,501	434
103 EMORY UNIVERSITY	15,725	13,558	300	867	60	940
104 INST OF AGRI UNIV OF TENN	15,711I	6,878I	5,234I	455I	3,144I	0
105 UNIV OF VT & ST AGRIC COL	15,685	11,640	1,227	801	1,512	505
106 UNIV OF MD BALT PROF SCH	15,088	13,322	0	114	0	1,652
107 RENSSELAER POLYTECH INST	14,824	9,192	401	1,394	2,857E	980
108 UNIVERSITY OF DENVER	14,743	10,786	253	1,697	2,007	0
109 UNIV OF ILL MED CTR CHGO	14,644	10,329	961	449	1,370	1,535
110 UNIV OF MAINE ORONO	14,339	5,825	2,702	392	5,253E	167
TOTAL, 1ST 110 INSTS.	5,184,833	3,543,693	420,651	184,835	693,552	342,102
111 U TEX HLTH SCI CTR S ANTO	13,972	10,158	74	722	1,637	1,381
112 UNIV OF CAL SANTA BARBARA	13,967	11,078	189	0	1,119	1,581
113 MONTANA STATE UNIVERSITY	13,737	6,504	5,025	1,070	1,138	0
114 UNIVERSITY OF IDAHO	13,721	6,402	4,423	301	1,625	970
115 TEXAS TECH UNIVERSITY	13,032	6,363	3,470	1,969	441	789
116 NORTH DAKOTA STATE UNIV	12,984	2,893	7,718E	1,221	1,141	11
117 UNIV OREGON HLTH SCI CTR	12,854	8,836	0	325	1,501	2,192
118 U TENNESSEE KNOXVILLE	12,742E	9,169E	1,462E	1,354E	757E	0E
119 U OF HOUSTON CENTRAL CAM	12,628	6,154	32	602	4,189	1,651
120 TULANE UNIVERSITY	12,426	7,990	253	781	1,129	2,273
TOTAL, 1ST 120 INSTS.	5,316,896	3,619,240	443,297	193,180	708,229	352,950
121 COL OF MED & DENT OF N J	12,594	9,095	0	0	999	2,300
122 UNIV OF P R-MAYAGUEZ	12,162	4,889	4,978	0	2,295	0
123 TUFTS UNIVERSITY	11,783	10,059	0	224	15	1,485
124 HOWARD UNIVERSITY	11,658	8,172	9	357	1,657	1,463
125 ALBANY MEDICAL COLLEGE	11,420	5,351	416	896	1,242	3,515
126 U TEX HLTH SCI CTR HOUSTN	11,340	8,811	244	421	636	1,228
127 UNIVERSITY OF WYOMING	11,049	6,233	251	1,104	3,448	13
128 SUNY DOWNSTATE MED CTR	10,799	7,358	39	275	0	3,127
129 MEDICAL COLLEGE OF WIS	10,655	6,664	0	593	1,985	1,413
130 UNIV OF NEW HAMPSHIRE	10,112	6,189	905	184	2,254	580
TOTAL, 1ST 130 INSTS.	5,430,268	3,692,061	450,139	197,234	722,760	368,074
131 DARTMOUTH COLLEGE	9,578	8,451	277	0	205	645
132 BRANDEIS UNIVERSITY	9,566	8,854	0	0	0	712
133 THOMAS JEFFERSON UNIV	9,532E	7,739E	0	355E	63E	1,375E
134 UNIV TENN CTR HEALTH SCI	9,529	8,182	13	400	0	934
135 LEHIGH UNIVERSITY	9,413	5,131	474	1,076	2,606	125
136 UNIVERSITY OF OREGON MAIN	9,104	7,893	91	34	921	165
137 UNIV OF ILL CHICAGO CIR	8,918	5,772	579	393	2,193	31
138 UNIVERSITY OF NOTRE DAME	8,845	7,316	22	683	324	0
139 RUSH UNIVERSITY	8,815	6,195	188	792	1,640	0
140 MED UNIV OF SO CAROLINA	8,615	6,774	341	401	524	575
TOTAL, 1ST 140 INSTS.	5,522,183	3,764,818	452,124	201,368	731,236	372,637
141 ST JOHN'S UNIVERSITY (NY)	8,519	636	28	6	7,849	0
142 MICHIGAN TECH UNIVERSITY	8,483	3,193	1,911	2,064	1,282	33
143 SOUTH DAKOTA STATE UNIV	8,129	3,370	204	313	4,032	210
144 RICE UNIVERSITY	8,027	6,184	55	467	0	1,323
145 UNIVERSITY OF MISSISSIPPI	7,976	4,221	220	214	2,634	587
146 UNIV OF CAL SANTA CRUZ	7,844	5,823	31	0	1,756	234
147 UNIV OF NEVADA - RENO	7,811	3,486	2,630	391	842	452
148 U OF NEB MED CTR AT OMAHA	7,419	5,213	25	546	573	552
149 N MEX INST MINING & TECH	7,312	5,011	720	786	787	8
150 UNIV OF OKLA HLTH SCI CTR	7,214	4,547	36	139	2,384	108
TOTAL, 1ST 150 INSTS.	5,600,919	3,806,502	457,984	206,294	753,775	376,364

SEE FOOTNOTES AT END OF TABLE.

TABLE B-16. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY SOURCE OF FUNDS: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
151 UNIV OF WIS-MILWAUKEE	7,029	3,705	2,589	139	323	273
152 ARIZONA STATE UNIVERSITY	6,938	5,939	114	124	538	223
153 POLYTECHNIC INST OF N Y	6,814E	4,584E	1,216E	287E	400E	327E
154 SUNY AT ALBANY	6,711E	5,206	167	2	1,002	334
155 ST LOUIS UNIVERSITY	6,695E	5,139E	40	0	727	789
156 UNIV OF SOUTH CAROLINA	6,599E	4,844E	0	0	0	1,755E
157 SOUTHERN ILL U-CARBONDALE	6,589	3,044	1,719	967	859	0
158 UNIVERSITY OF LOUISVILLE	6,489	4,184	740	421	856	288
159 UNIV OF MISSOURI ROLLA	6,421	3,064	8	169	2,452	733
160 SUNY UPSTATE MEDICAL CTR	6,345E	4,029E	103E	0	0	2,213E
TOTAL, 1ST 160 INSTS.	5,667,549	3,850,240	464,676	208,402	760,932	383,299
161 US NAVAL POSTGRAD SCHOOL	6,314	6,246	68	0	0	0
162 UNIV OF TEXAS AT DALLAS	6,036	4,223	112	87	1,274	342
163 WAKE FOREST UNIVERSITY	5,972E	4,888E	42E	97E	112E	933E
164 SUNY COL OF ENV SCI & FOR	5,699	1,686	157	504	2,937	415
165 NORTHEASTERN UNIVERSITY	5,669I	4,742I	156I	107I	467I	197I
166 UNIV OF CENTRAL FLORIDA	5,582	2,853	744	109	1,844	33
167 U OF CAL SYS WIDE PRGMS	5,568	656	0	0	4,800	112
168 U OF ARKANSAS MED SCI CAM	5,511	4,275	0	209	842	185
169 MEDICAL COL OF GEORGIA	5,476	5,123	5	144	80	124
170 DESERT RESEARCH INSTITUTE	5,443	2,604	634	1,814	391	0
TOTAL, 1ST 170 INSTS.	5,724,821	3,887,536	466,594	211,472	773,679	385,540
171 BOSTON COLLEGE	5,430	4,818	33	54	350	175
172 DREXEL UNIVERSITY	5,367	3,960	293	348	766	0
173 MED COL OF OHIO AT TOLEDO	5,362	3,925	0	0	0	1,437
174 NEW YORK MEDICAL COLLEGE	5,233E	4,363E	112E	152E	0	606E
175 UNIVERSITY OF N DAKOTA	4,979E	3,996E	277I	216I	254I	236I
176 NC AG & TECH STATE UNIV	4,969	4,888E	56E	0	0	25E
177 WRIGHT STATE UNIVERSITY	4,923	3,365	19	87	1,044	408
178 UNIV OF SOUTH FLORIDA	4,771	2,759	474	92	974	472
179 COLORADO SCHOOL OF MINES	4,510	3,741	272	497	0	0
180 SUNY AT BINGHAMTON	4,504	3,284	154	160	767E	159
TOTAL, 1ST 180 INSTS.	5,774,869	3,926,615	468,284	213,079	777,834	389,058
181 SAN DIEGO STATE UNIV	4,417	3,556	97	61	0	703
182 UNIV OF WEST FLORIDA	4,333	1,967	596	89	1,647	34
183 STEVENS INSTITUTE OF TECH	4,130	2,460	120	1,198	352	0
184 LOMA LINDA UNIVERSITY	4,091E	3,111E	56E	18E	16E	890E
185 MANNEMANN MED COL & HOSP	4,070E	3,158E	60E	160E	654E	38E
186 BRIGHAM YOUNG UNIVERSITY	4,002E	1,521E	283E	2,199E	0	0
187 NORTHERN ILLINOIS UNIV	3,898	1,233	169	31	2,216	249
188 WORCESTER POLY INSTITUTE	3,696	2,035	0	1,630	31	0
189 U MASS MED SCHL WORCESTER	3,676	2,404	16	14	785	457E
190 INSTITUTE PAPER CHEMISTRY	3,664E	ABE	17E	442E	2,654E	533E
TOTAL, 1ST 190 INSTS.	5,814,846	3,948,108	469,698	218,919	786,189	391,932
191 CLARKSON COLLEGE OF TECH	3,624	2,639	15	594	376	0
192 CUNY CITY COLLEGE	3,565	3,299	124	0	0	142
193 UNIV OF ARK PINE BLUFF	3,564	2,106	1,052	183	203	20
194 UNIV OF MO CENTRAL OFF	3,541	469	0	0	2,979	93
195 LOYOLA UNIV - CHICAGO	3,532I	2,834I	0	88I	114I	496I
196 NORTH TEXAS STATE UNIV	3,456E	1,970E	261E	0	639E	585E
197 UNIVERSITY OF NEW ORLEANS	3,447	1,660	150	582	984	70
198 UNIV OF P R-MED SCI CMPUS	3,342I	3,342I	0	0	0	0
199 OREGON GRADUATE CENTER	3,210	1,870	85	874	191	196
200 OHIO UNIVERSITY	3,187	1,600	352	35	1,129	71
TOTAL, 1ST 200 INSTS.	5,949,314	3,969,897	471,737	221,279	792,805	393,596
TOTAL, ALL OTHER INSTS.	200,011	122,672	20,573	14,232	28,135	14,399

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-17. -- R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	3,927,971	2,347,737	448,742	141,651	654,806	235,035
1 UNIV OF WIS-MADISON	138,227	89,350	24,883	2,615	14,112	7,257
2 UNIV OF CAL SAN DIEGO	124,830	111,038	648	0	6,176	6,958
3 UNIVERSITY OF MINNESOTA	119,065	68,463	12,847	4,352	24,226	9,177
4 UNIVERSITY OF WASHINGTON	111,858	93,109	5,191	3,830	334	9,394
5 UNIVERSITY OF MICHIGAN	111,916	75,549	1,535	6,145	23,231	4,856
6 UNIV OF CAL BERKELEY	90,377	64,127	2,474	0	18,405	5,371
7 UNIV OF CAL LOS ANGELES	88,934	70,365	192	0	7,163	11,214
8 UNIV OF ILL URBANA	83,274	52,327	4,801	3,404	21,095	1,647
9 UNIV OF TEXAS AT AUSTIN	78,621	48,666	4,280	1,237	17,082	7,356
10 UNIV OF CAL SAN FRANCISCO	73,426	61,172	665	0	4,470	7,119
TOTAL, 1ST 10 INSTS.	1,019,928	734,166	57,516	21,583	136,294	70,369
11 MICHIGAN STATE UNIVERSITY	72,354	34,830	15,086	2,543	15,330	4,565
12 PENNSYLVANIA STATE UNIV	71,840	45,001	1,647	7,842	16,900	450
13 TEXAS A & M UNIVERSITY	71,461	31,860	29,355	4,281	1,796	4,169
14 OHIO STATE UNIVERSITY	70,652	40,555	13,092	3,699	5,236	8,070
15 UNIVERSITY OF ARIZONA	69,095	35,559	13,859	5,923	9,200	4,554
16 UNIV OF CAL DAVIS	68,429	35,078	3,581	0	24,798	4,972E
17 UNIVERSITY OF COLORADO	62,056	48,632	65	2,674	4,527	6,158
18 PURDUE UNIVERSITY	61,765	38,041	7,712	4,756	10,015	1,241
19 UNIVERSITY OF FLORIDA	56,656E	23,627E	6,814E	3,045E	13,581E	9,589E
20 GEORGIA INSTITUTE OF TECH	56,653	32,827	2,033	6,243	15,550	0
TOTAL, 1ST 20 INSTS.	1,680,889	1,100,176	150,760	62,589	253,227	114,137
21 UNIVERSITY OF GEORGIA	55,595	17,953	809	2,076	34,311	446
22 LOUISIANA STATE UNIV	53,058	15,868	20,829	1,267	12,382	2,712
23 IUMA ST U OF SCI & TECH	49,459	16,819	14,032	1,854	15,044	1,710
24 OREGON STATE UNIVERSITY	44,713	24,669	13,748	1,572	1,651	3,073
25 UNIVERSITY OF CONNECTICUT	44,248	27,510	1,154	959	11,064	3,561
26 N C STATE UNIV AT RALEIGH	42,725	15,611	20,463	1,800	3,872	979
27 UNIV OF ALASKA FAIRBANKS	42,154	26,587	1,383	830	10,731	2,623
28 COLORADO STATE UNIVERSITY	40,678	28,488	6,457	2,505	2,893	335
29 UNIV OF HAWAII-MANOA	40,593	25,833	12,399	184	1,446	731
30 UNIV OF MD COLLEGE PARK	39,917	23,174	8,507	2,263	5,973	0
TOTAL, 1ST 30 INSTS.	2,134,029	1,322,688	250,541	77,899	352,594	130,307
31 UNIV OF NC AT CHAPEL HILL	38,924	31,580	1,932	1,370	1,565	2,477
32 UNIVERSITY OF IOWA	38,866	33,603	38	1,095	2,714	1,416
33 UNIVERSITY OF UTAH	37,175	31,588	1,029	851	2,430	1,277
34 RUTGERS THE ST UNIV OF NJ	36,335	16,159	7,195	1,008	10,876	1,097
35 UNIV OF TEX CANCER CENTER	34,920	18,471	0	0	12,932	3,517
36 UNIV OF MISSOURI COLUMBIA	34,620	13,603	8,630	509	9,801	2,077
37 VA POLYTECH INST & ST U	33,604	16,380	10,546	3,692	2,986	0
38 UNIV OF NEBRASKA-LINCOLN	32,607	10,380	840	996	19,640	751
39 UNIVERSITY OF PITTSBURGH	31,863	23,327	325	774	4,481	2,956
40 WASHINGTON STATE UNIV	31,538	11,855	14,759	795	3,129	1,000
TOTAL, 1ST 40 INSTS.	2,484,481	1,529,634	295,035	88,989	423,148	146,675
41 UNIV ALABAMA BIRMINGHAM	30,959	29,171	113	1,585	479	3,611
42 INDIANA UNIV	30,307	22,278	751	831	3,963	2,434
43 UNIVERSITY OF KENTUCKY	30,013	13,093	4,832	312	11,776	0
44 MISSISSIPPI STATE UNIV	29,035	8,824	11,583	458	4,846	1,324E
45 UNIVERSITY OF CINCINNATI	28,991	16,041	184	1,237	5,253	6,276
46 KANS ST U - AG & APP SCI	27,793	8,677	11,592	1,101	4,842	1,571
47 UNIVERSITY OF VIRGINIA	27,297	23,606	462	984	1,097	1,149
48 U TEX HLTH SCI CTR DALLAS	26,586	20,871	686	1,319	75	3,535
49 SUNY AT STONY BROOK	26,183	18,460	906	565	4,336	1,916
50 NEW MEXICO STATE UNIV	25,618	21,718	890	0	88	2,922
TOTAL, 1ST 50 INSTS.	2,767,263	1,708,373	327,744	97,381	461,903	171,852

SEE FOOTNOTES AT END OF TABLE.

TABLE B-17. -- R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1980 - CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 UNIV OF CAL RIVERSIDE	24,961	8,862	1,611	0	13,008	1,480E
52 UTAH STATE UNIVERSITY	24,611	14,819	5,454	533	2,466	1,339
53 UNIVERSITY OF NEW MEXICO	24,242	19,024	859	2,822	1,488	49
54 SUNY AT BUFFALO	23,437	15,664	264	0	5,877	1,632
55 OKLAHOMA STATE UNIVERSITY	23,417	11,107	2,608	2,224	7,478	0
56 UNIV OF CAL IRVINE	23,303	20,211	303	0	681	2,108
57 FLORIDA STATE UNIVERSITY	21,497	8,501	1,207	247	11,052	490
58 UNIV OF ARK FAYETTEVILLE	21,126	2,902	892	1,186	15,735	411
59 WAYNE STATE UNIVERSITY	20,818	12,196	265	1,604	4,966	1,787
60 AUBURN UNIVERSITY	20,248	6,969	7,132	530	5,220	397
TOTAL, 1ST 60 INSTS.	2,994,923	1,828,628	348,339	106,527	529,874	181,555
61 UNIVERSITY OF KANSAS	19,869	16,676	2,000E	0	1,000E	193E
62 TEMPLE UNIVERSITY	19,613	13,686	195	185	2,026	2,521
63 CLEMSON UNIVERSITY	18,366	5,847	8,761	1,126	2,204	428
64 VIRGINIA COMMONWLTH UNIV	18,119	14,675	302	143	1,590	1,409
65 WEST VIRGINIA UNIVERSITY	17,510	9,225	6,590	519	263	913
66 UNIV OF RHODE ISLAND	16,932E	13,847	3,085I	0	0	0
67 UNIVERSITY OF DELAWARE	16,746	9,180	467	702	5,419	978
68 UNIV OF MASS AT AMHERST	16,624	9,871	1,935	413	4,124	281
69 U TEX MED BRNCH GALVESTON	16,041	10,387	818	467	2,784	1,535
70 UNIV OF OKLAHOMA NORMAN	15,805	7,634	675	509	6,501	434
TOTAL, 1ST 70 INSTS.	3,169,548	1,939,656	373,170	110,590	555,785	190,347
71 INST OF AGRI UNIV OF TENN	15,711I	6,878I	5,234I	455I	3,144I	0
72 UNIV OF VT & ST AGRIC COL	15,685	11,640	1,227	801	1,512	505
73 UNIV OF MD BALT PROF SCH	15,088	13,322	0	114	0	1,652
74 UNIV OF ILL MED CTR CHGO	14,644	10,329	981	449	1,370	1,535
75 UNIV OF MAINE ORONO	14,339	5,825	2,702	392	5,253E	167
76 U TEX HLTH SCI CTR S ANTO	13,972	10,158	74	722	1,637	1,381
77 UNIV OF CAL SANTA BARBARA	13,967	11,078	189	0	1,119	1,581
78 MONTANA STATE UNIVERSITY	13,737	6,504	4,025	1,070	1,138	0
79 UNIVERSITY OF IDAHO	13,721	6,402	4,423	301	1,625	970
80 TEXAS TECH UNIVERSITY	13,032	6,363	3,470	1,969	441	789
TOTAL, 1ST 80 INSTS.	3,313,444	2,028,155	396,475	116,863	573,024	198,927
81 NORTH DAKOTA STATE UNIV	12,984	2,893	7,718E	1,221	1,141	11
82 UNIV OREGON HLTH SCI CTR	12,854	8,836	0	325	1,501	2,192
83 U TENNESSEE KNOXVILLE	12,742E	9,169E	1,462E	1,354E	757E	0E
84 U OF HOUSTON CENTRAL CAM	12,628	6,154	32	602	4,189	1,651
85 COL OF MED & DENT OF N J	12,394	9,095	0	0	999	2,300
86 UNIV OF P R-MAYAGUEZ	12,162	4,889	4,978	0	2,295	0
87 U TEX HLTH SCI CTR HOUSTN	11,340	8,811	244	421	636	1,228
88 UNIVERSITY OF WYOMING	11,049	6,233	251	1,104	3,448	13
89 SUNY DOWNSTATE MED CTR	10,799	7,358	39	275	0	3,127
90 UNIV OF NEW HAMPSHIRE	10,112	6,189	905	184	2,254	580
TOTAL, 1ST 90 INSTS.	3,432,508	2,097,782	412,104	122,349	590,244	210,029
91 UNIV TENN CTR HEALTH SCI	9,529	8,182	13	400	0	934
92 UNIVERSITY OF OREGON MAIN	9,104	7,893	91	34	921	155
93 UNIV OF ILL CHICAGO CIR	8,918	5,722	579	393	2,193	31
94 MED UNIV OF SO CAROLINA	8,615	6,774	341	401	524	575
95 MICHIGAN TECH UNIVERSITY	8,483	3,193	1,911	2,064	1,282	33
96 SOUTH DAKOTA STATE UNIV	8,129	3,378	294	313	4,032	210
97 UNIVERSITY OF MISSISSIPPI	7,976	4,221	221	214	2,634	687
98 UNIV OF CAL SANTA CRUZ	7,844	5,023	31	0	1,756	234
99 UNIV OF NEVADA - RENO	7,811	3,486	2,630	391	842	462
100 U OF NEB MED CTR AT OMAHA	7,419	5,213	25	546	973	662
TOTAL, 1ST 100 INSTS.	3,516,336	2,151,659	418,149	127,105	605,401	214,022
TOTAL, ALL OTHER INSTS.	311,635	196,078	30,593	14,546	49,405	21,013

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-18. -- R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	2,221,354	1,744,832	43,568	93,860	166,134	172,960
1 JOHNS HOPKINS UNIVERSITY	253,204	239,855	3,131	0	1,306	8,912
2 MASS INST OF TECHNOLOGY	163,566	138,400	826	11,402	874	12,064
3 STANFORD UNIVERSITY	113,120	102,645	165	3,215	2,124	4,971
4 CORNELL UNIVERSITY	107,611	70,583	19,095	9,153	5,364	7,416
5 COLUMBIA UNIV MAIN DIV	101,407	83,729	167	364	3,681	13,456
6 HARVARD UNIVERSITY	100,901E	76,377	280E	3,995E	6,386E	13,853E
7 UNIV OF PENNSYLVANIA	94,198	70,553	882	2,010	9,253	11,500
8 UNIV OF SOUTHERN CAL	74,304	50,001	2,777	7,462	11,545	2,519
9 YALE UNIVERSITY	71,446	63,572	1,757	582	4,594	941
10 UNIVERSITY OF ROCHESTER	65,845	43,890	1,137	7,869	8,588	4,361
TOTAL, 1ST 10 INSTS.	1,145,602	939,605	30,217	42,052	53,715	80,013
11 WASHINGTON UNIVERSITY	59,379	47,756	570	1,029	3,770	6,254
12 UNIVERSITY OF CHICAGO	58,436	50,118	239	402	4,502	3,175
13 NEW YORK UNIVERSITY	56,739	43,705	1,165	2,080	3,070	6,739
14 CALIFORNIA INST OF TECH	43,259	38,330	320	1,993	71	2,545
15 YESHIVA UNIVERSITY	42,666	31,540	0	0	5,000	6,126
16 NORTHWESTERN UNIVERSITY	42,617	31,971	252	290	6,181	3,953
17 UNIVERSITY OF MIAMI	41,450	29,268	142	1,895	6,743	3,402
18 CASE WESTERN RESERVE UNIV	40,688	29,721	547	1,790	3,955	4,675
19 DUKE UNIVERSITY	39,066	36,165	502	779	291	1,329
20 ROCKEFELLER UNIVERSITY	38,089	19,290	179	678	12,996	4,946
TOTAL, 1ST 20 INSTS.	1,607,991	1,297,469	34,113	52,988	100,254	123,167
21 BAYLOR COL OF MEDICINE	37,908	31,211	0	2,801	836E	3,060
22 CARNEGIE-MELLON UNIV	29,308	19,645	128	5,010	682	3,843
23 WOODS HOLE OCNGRPHIC INST	29,209	25,042	8	195	1,033	2,971
24 PRINCETON UNIVERSITY	27,821	20,895	0	423	4,799	1,704
25 CUNY MT SINAI SCH OF MED	26,718	21,182	148	554	866	3,958
26 BOSTON UNIVERSITY	24,393	22,238	530	241	38	1,346
27 VANDERBILT UNIVERSITY	20,570	16,498	429	1,890	771	982
28 UNIVERSITY OF DAYTON	19,678	17,988	44	1,257	348E	41
29 GEORGE WASHINGTON UNIV	18,961	16,780	0	359	1,081	741
30 BROWN UNIVERSITY	17,950	15,375	50	650	1,875	0
TOTAL, 1ST 30 INSTS.	1,860,507	1,504,323	35,450	66,328	112,583	141,823
31 GEORGETOWN UNIVERSITY	17,502	9,558	32	1,535	2,319	4,058
32 SYRACUSE UNIVERSITY	16,517	8,626	921	213	6,662	95
33 EMORY UNIVERSITY	15,725	13,558	300	867	60	940
34 RENSSELAER POLYTECH INST	14,824	9,192	401	1,394	2,857E	980
35 UNIVERSITY OF DENVER	14,743	10,786	253	1,697	2,007	0
36 TULANE UNIVERSITY	12,426	7,990	253	781	1,129	2,273
37 TUFTS UNIVERSITY	11,783	10,059	0	224	15	1,485
38 HOWARD UNIVERSITY	11,658	8,172	9	357	1,657	1,463
39 ALBANY MEDICAL COLLEGE	11,420	5,351	416	896	1,242	3,515
40 MEDICAL COLLEGE OF WIS	10,655	6,664	0	593	1,985	1,413
TOTAL, 1ST 40 INSTS.	1,997,760	1,594,279	38,035	74,885	132,516	158,045
41 DARTMOUTH COLLEGE	9,578	8,451	277	0	205	645
42 BRANDEIS UNIVERSITY	9,566	8,854	0	0	0	712
43 THOMAS JEFFERSON UNIV	9,532E	7,739E	0	355E	63E	1,375E
44 LEHIGH UNIVERSITY	9,413	5,131	474	1,076	2,606	126
45 UNIVERSITY OF NOTRE DAME	8,845	7,816	22	683	324	0
46 RUSH UNIVERSITY	8,815	6,195	188	792	1,640	0
47 ST JOHN'S UNIVERSITY (NY)	8,519	636	28	6	7,849	0
48 NICE UNIVERSITY	8,029	6,184	55	467	0	1,323
49 POLYTECHNIC INST OF N Y	6,814E	4,586E	1,216E	287E	400E	325
50 ST LOUIS UNIVERSITY	6,695E	5,139E	40	0	727	789
TOTAL, 1ST 50 INSTS.	2,083,566	1,655,008	40,335	78,551	146,330	163,342

SEE FOOTNOTES AT END OF TABLE.

TABLE B-18. -- R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVT.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 WAKE FOREST UNIVERSITY	5,972E	4,888E	42E	97E	112E	833E
52 NORTHEASTERN UNIVERSITY	5,669I	4,742I	156I	107I	467I	197I
53 BOSTON COLLEGE	5,430	4,818	33	54	350	175
54 DREXEL UNIVERSITY	5,367	3,960	293	349	766	0
55 NEW YORK MEDICAL COLLEGE	5,233E	4,343E	112E	152E	0	536E
56 STEVENS INSTITUTE OF TECH	4,130	2,460	120	1,198	352	0
57 LOMA LINDA UNIVERSITY	4,091E	3,111E	56E	19E	16E	890E
58 HAHNEMANN MED COL & HOSP	4,070E	3,158E	60E	160E	654E	38E
59 BRIGHAM YOUNG UNIVERSITY	4,002E	1,521E	223E	2,198E	0	0
60 WORCESTER POLY INSTITUTE	3,696	2,035	0	1,630	31	0
TOTAL, 1ST 60 INSTS.	2,131,226	1,690,064	41,490	94,513	149,078	166,081
61 INSTITUTE PAPER CHEMISTRY	3,664E	48E	17E	442E	2,654E	503E
62 CLARKSON COLLEGE OF TECH	3,624	2,639	15	594	376	0
63 LOYOLA UNIV - CHICAGO	3,532I	2,834I	0	88I	114I	496I
64 OREGON GRADUATE CENTER	3,210	1,870	85	879	191	185
65 CATHOLIC UNIV OF AMERICA	3,017	2,677	148	0	175	17
66 ILLINOIS INST OF TECH	3,010I	1,962I	200I	729I	119I	0
67 SOUTHERN METHODIST UNIV	2,743	1,964	7	117	505	150
68 THE MEDICAL COL OF PENNA	2,651	2,381	0	9	0	252
69 GALLAUDET COLLEGE	2,589E	0	0	0	2,589I	0
70 AMERICAN UNIVERSITY	2,456	2,374	61	19	0	3
TOTAL, 1ST 70 INSTS.	2,161,722	1,708,813	42,023	87,387	155,801	167,699
71 CREIGHTON UNIVERSITY	2,348I	1,566I	47I	421I	202I	112I
72 NEW YORK INST TECHNOLOGY	2,301	104	0	626	1,571	0
73 WENTWORTH INST OF TECH	2,108	2,088	5	0	6	9
74 TEXAS CHRISTIAN UNIV	2,086	1,479	235	234	91	47
75 WESLEYAN UNIVERSITY	1,956E	1,296E	100E	16E	417E	127E
76 ATLANTA UNIVERSITY	1,797	1,548	0	93	133	23
77 ROCHESTER INST TECHNOLOGY	1,701	521	26	14	1,131	9
78 UNIVERSITY OF TULSA	1,540	703	0	800	37	0
79 WELLESLEY COLLEGE	1,472	622	0	0	0	850
80 THE WRIGHT INSTITUTE	1,461	1,392	0	0	69	0
TOTAL, 1ST 80 INSTS.	2,180,492	1,720,132	42,436	89,591	159,458	168,875
81 UNIVERSITY OF REDLANDS	1,446I	30I	0	0	1,416I	0
82 FAIRLEIGH DICKINSON UNIV	1,356	878	14	323	0	141
83 CLARK UNIVERSITY	1,348	1,048	16	0	134	150
84 FLORIDA INST OF TECH	1,269	701	104	73	254	137
85 UNIVERSITY OF SANTA CLARA	1,108I	1,088I	20I	0	0	0
86 MARQUETTE UNIVERSITY	1,103	798	3	152	150	0
87 U HLTH SCI/CHCGO MED SCH	1,094I	767I	45I	2I	154I	126I
88 PURDHAM UNIVERSITY	1,092E	1,084E	1I	3I	4I	0
89 NOVA UNIVERSITY	1,044I	669I	83I	92I	61I	139I
90 PUHONA COLLEGE	969E	886E	0	0	0	83
TOTAL, 1ST 90 INSTS.	2,192,321	1,728,087	42,722	90,236	161,631	169,551
91 ALFRED UNIVERSITY	954E	72E	0	352I	530I	0
92 MANHATTAN COLLEGE	941	851	0	0	71	19
93 OCCIDENTAL COLLEGE	922	218	0	704	0	0
94 AMHERST COLLEGE	853	789	0	0	64	0
95 INSTITUTE OF TEXTILE TECH	823I	0I	0	823I	0	0
96 UNIVERSITY OF THE PACIFIC	779I	593I	106I	0	0	80I
97 HARVEY MUDD COLLEGE	748	418	0	307	23	0
98 NE OHIO UNIVS MED SCHOOL	748	566	0	0	62	120
99 EMMANUEL COLLEGE	731	728	0	0	3	0
100 TEXAS COL OF OSTEO MED	720	300	152	0	150	118
TOTAL, 1ST 100 INSTS.	2,200,540	1,732,616	42,980	92,422	162,534	169,988
TOTAL, ALL OTHER INSTS.	20,814	12,216	588	1,439	3,600	2,972

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-19. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	6,049,325	862,600	679,658	506,064	191,940	3,210,687	111,019	341,450	145,907
1 JOHNS HOPKINS UNIVERSITY	253,204	55,865	48,230	28,447	42,018	70,077	1,131	2,690	4,766
2 MASS INST OF TECHNOLOGY	163,566	69,576	46,362	8,912	9,007	20,651	2,572	4,008	2,478
3 UNIV OF WIS-MADISON	135,227	11,264	15,802	13,130	4,610	70,707	6,232	13,137	3,345
4 UNIV OF CAL SAN DIEGO	124,830	2,038	20,114	99,965	705	39,681	715	505	1,107
5 UNIVERSITY OF MINNESOTA	119,065	9,285	6,554	2,190	1,398	90,672	3,907	4,420	639
6 STANFORD UNIVERSITY	113,120	33,327	17,345	2,313	7,113	46,776	2,208	4,038	0
7 UNIVERSITY OF WASHINGTON	111,858	5,445	5,430	16,413	900	70,582	1,462	1,735	9,891
8 UNIVERSITY OF MICHIGAN	111,316	15,209	6,534	12,147	1,672	50,661	4,045	21,048	0
9 CORNELL UNIVERSITY	107,611	14,274	17,249	3,363	1,543	42,421	2,280	6,393	88
10 COLUMBIA UNIV MAIN DIV	101,407	7,719	10,404	17,886	598	58,219	491	6,090	0
TOTAL, 1ST 10 INSTS.	1,344,204	224,002	194,004	164,766	69,564	590,447	25,043	64,064	22,314
11 HARVARD UNIVERSITY	100,901E	2,812E	13,422E	5,548E	1,820E	67,599E	1,785E	7,365E	1,550E
12 UNIV OF PENNSYLVANIA	96,199	4,441	9,130	665	3,465	58,766	1,142	10,868	2,721
13 UNIV OF CAL BERKELEY	90,377	20,458	15,914	2,512	1,712	35,686	2,708	10,292	1,095E
14 UNIV OF CAL LOS ANGELES	85,934	7,528	11,063	6,721	660	51,424	2,934	3,604	0
15 UNIV OF ILL URBANA	83,274	20,385	10,800	7,405	5,384	26,237	2,039	8,761	2,263
16 UNIV OF TEXAS AT AUSTIN	79,621	10,362	18,932	13,452	2,996	8,381	1,494	5,338	17,666
17 UNIV OF SOUTHERN CAL	74,304	20,624	3,373	6,601	245	35,939	2,383	5,139	0
18 UNIV OF CAL SAN FRANCISCO	73,425	0	1,799	0	5	70,400	0	1,222	0
19 MICHIGAN STATE UNIVERSITY	72,354	2,283	3,913	2,542	678	50,566	1,891	6,531	3,870
20 PENNSYLVANIA STATE UNIV	71,840	25,411	3,991	7,181	1,475	28,245	236	2,417	1,884
TOTAL, 1ST 20 INSTS.	2,172,433	338,386	286,341	217,393	91,004	1,010,690	41,655	133,631	53,363
21 TEXAS A & M UNIVERSITY	71,461	19,844	5,427	5,567	546	38,118	11	1,948	0
22 YALE UNIVERSITY	71,446	2,517	7,309	733	2,016	53,859	1,243	3,769	0
23 OHIO STATE UNIVERSITY	70,652	11,569	4,745	1,464	1,250	38,998	733	3,156	8,737
24 UNIVERSITY OF ARIZONA	69,095	6,208	15,505	12,105	802	29,390	157	3,985	943
25 UNIV OF CAL DAVIS	68,429	3,952	2,573	466	56	58,287	175	2,721	189
26 UNIVERSITY OF ROCHESTER	65,845	17,285	6,343	31	875	38,917	1,199	518	677
27 UNIVERSITY OF COLORADO	62,056	2,273	12,874	5,641	690	34,530	3,599	2,270	179
28 PURDUE UNIVERSITY	61,765	19,132	6,375	841	1,476	28,716	564	4,307	354
29 WASHINGTON UNIVERSITY	59,379	2,902	2,359	693	4,050	47,803	738	834	0
30 UNIVERSITY OF CHICAGO	58,435	0	14,501E	2,159E	1,103E	37,570E	695E	2,245E	0
TOTAL, 1ST 30 INSTS.	2,830,997	424,078	384,352	247,093	103,868	1,416,878	50,932	159,354	64,442
31 NEW YORK UNIVERSITY	56,739	50	2,601	295	5,004	42,881	897	2,940	2,071
32 UNIVERSITY OF FLORIDA	56,656E	15,873E	3,591E	541E	449E	32,868E	938E	1,930E	466E
33 GEORGIA INSTITUTE OF TECH	56,653	39,112	5,678	2,404	4,288	588	134	4,006	443
34 UNIVERSITY OF GEORGIA	55,595	1,517	1,743	2,149	1,347	41,341	842	6,656	0
35 LOUISIANA STATE UNIV	53,058	4,365	3,591	7,503	1,029	34,525	241	1,804	0
36 IOWA ST U OF SCI & TECH	49,459	9,101	1,508	1,033	2,195	26,983	343	3,108	5,208
37 OREGON STATE UNIVERSITY	44,713	2,881	1,360	10,176	776	27,148	0	1,982	390
38 UNIVERSITY OF CONNECTICUT	44,248	4,187	2,765	1,007	725	30,450	3,761	1,353	0
39 CALIFORNIA INST OF TECH	43,259	9,135	17,886	7,266	2,142	6,206	0	625	0
40 N C STATE UNIV AT RALEIGH	42,725	8,616	1,034	3,153	1,037	28,519	30	336	0
TOTAL, 1ST 40 INSTS.	3,334,102	518,915	406,109	282,620	122,840	1,688,387	58,118	184,093	73,020
41 YESHIVA UNIVERSITY	42,666	0	30	0	66	42,272	0	298	0
42 NORTHWESTERN UNIVERSITY	42,617	5,145	3,630	359	361	25,584	948	982	5,608
43 UNIV OF ALASKA FAIRBANKS	42,154	555	1,228	28,622	0	9,341	0	1,928	480
44 UNIVERSITY OF MIAMI	41,450	1,224	196	12,491	130	26,707	222	8	472
45 CASE WESTERN RESERVE UNIV	40,688	10,048	3,276	437	55	26,164	210	498	0
46 COLORADO STATE UNIVERSITY	40,678	10,765	2,386	2,249	649	20,326	339	2,426	1,536
47 UNIV OF HAWAII-MANOA	40,593	2,491	7,100	9,720	143	15,539	93	1,348	4,159
48 UNIV OF MD COLLEGE PARK	39,917	4,093	16,888	652	5,116	10,871	824	1,406	77
49 DUKE UNIVERSITY	39,066	1,481	2,799	1,000	408	31,395	602	1,381	0
50 UNIV OF NC AT CHAPEL HILL	38,924	0	2,376	3,060	744	27,897	287	3,411	1,149
TOTAL, 1ST 50 INSTS.	3,742,855	554,707	446,018	341,210	130,512	1,924,483	61,643	197,779	86,503

SEE FOOTNOTES AT END OF TABLE.

TABLE B-19. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIVERSITY OF IOWA	38,866	1,925	7,001	22	369	28,385	896	468	0
52 ROCKEFELLER UNIVERSITY	38,089	0	3,010	0	1,156	30,163	3,760	0	0
53 BAYLOR COL OF MEDICINE	37,908	0	0	0	0	37,908	0	0	0
54 UNIVERSITY OF UTAH	37,175	8,311	3,858	2,859	1,313	20,396	180	258	0
55 RUTGERS THE ST UNIV OF NJ	36,335	2,317	3,961	2,859	3,014	13,785	2,365	6,326	1,708
56 UNIV OF TEX CANCER CENTER	34,920	0	1,672	0	3,046	30,202	0	0	0
57 UNIV OF MISSOURI COLUMBIA	34,620	1,049	627	643	75	27,879	478	3,124	145
58 VA POLYTECH INST & ST U	33,604	9,374	2,604	2,444	344	17,437	198	1,203	0
59 UNIV OF NEBRASKA-LINCOLN	32,607	2,258	3,334	4,865	244	19,536	308	2,062	0
60 UNIVERSITY OF PITTSBURGH	31,863	3,807	4,405	1,144	1,789	17,583	427	1,062	1,646
TOTAL, 1ST 60 INSTS.	4,098,942	984,348	476,490	356,046	141,862	2,167,757	70,055	212,282	90,002
61 WASHINGTON STATE UNIV	31,538	3,560	1,490	285	170	23,663	37	542	1,791
62 UNIV ALABAMA BIRMINGHAM	30,959	82	221	0	27	30,624	0	5	0
63 INDIANA UNIV	30,307	202	8,567	562	591	16,039	1,311	1,427	1,608
64 UNIVERSITY OF KENTUCKY	30,013	5,683	493	863	226	22,311	0	437	0
65 CARNEGIE-MELLON UNIV	29,308	6,707	3,871	1,754	5,923	6,226	1,093	2,631	1,103
66 WOODS HOLE OCNGRPHIC INST	29,209	3,526	0	25,683	0	0	0	0	0
67 MISSISSIPPI STATE UNIV	29,035	3,272	120	85	76	22,935	0	2,018	529
68 UNIVERSITY OF CINCINNATI	28,991	2,483	783	223	88	24,737	11	37	629
69 PRINCETON UNIVERSITY	27,821	6,963	7,842	2,921	1,902	3,609	1,266	3,318	0
70 KANS ST U - AG & APP SCI	27,793	3,193	893	671	204	16,001	36	597	6,198
TOTAL, 1ST 70 INSTS.	4,393,916	620,019	500,770	389,093	151,069	2,333,902	73,809	223,294	101,860
71 UNIVERSITY OF VIRGINIA	27,297	5,629	2,935	1,680	369	14,869	499	1,172	144
72 CUNY MT SINAI SCH OF MED	26,719	0	0	0	22	26,696	0	0	0
73 U TEX HLTH SCI CTR DALLAS	26,586	0	0	0	19	26,567	0	0	0
74 SUNY AT STONY BROOK	26,193	1,435	6,251	3,900	900	11,704	734	766	493
75 NEW MEXICO STATE UNIV	25,618	21,510	963	1,215	211	1,179	178	306	56
76 UNIV OF CAL RIVERSIDE	24,951	0	7,647	452	297	19,733	213	395	2,024
77 UTAH STATE UNIVERSITY	24,611	6,793	569	4,836	75	9,716	137	1,538	1,397
78 BOSTON UNIVERSITY	24,393	314	1,580	171	97	20,250	166	812	1,003
79 UNIVERSITY OF NEW MEXICO	24,242	6,912	720	986	119	12,638	131	1,386	1,450
80 SUNY AT BUFFALO	23,437	2,690	1,986	750	775	15,511	221	1,374	130
TOTAL, 1ST 80 INSTS.	4,647,862	664,802	517,421	403,233	153,953	2,492,765	76,088	231,043	108,557
81 OKLAHOMA STATE UNIVERSITY	23,417	5,891I	1,243I	272I	111I	13,342I	17I	1,339I	1,202I
82 UNIV OF CAL IRVINE	23,303	760	4,908	0	144	15,990	7	1,471	23
83 FLORIDA STATE UNIVERSITY	21,497	0	5,490	3,594	3,247	4,058	1,594	3,183	331
84 UNIV OF ARK FAYETTEVILLE	21,126	4,108E	4,167E	406E	36E	6,439E	0	3,964E	2,006E
85 WAYNE STATE UNIVERSITY	20,818	2,724	2,550	8	527	13,382	246	1,210	171
86 VANDERBILT UNIVERSITY	20,570	516	1,305	82	109	17,245	600	643	70
87 AUBURN UNIVERSITY	20,248	2,838	571	5	22	16,636	0	176	0
88 UNIVERSITY OF KANSAS	19,859	2,088I	1,602I	1,506I	223I	8,542I	5,008I	757I	143I
89 UNIVERSITY OF DAYTON	19,679	11,908	4,499	144	2,178	351	4	104	490
90 GEORGE WASHINGTON UNIV	19,961	3,235	422	581	1,554	10,320	170	1,614	1,065
TOTAL, 1ST 90 INSTS.	4,857,349	698,870	544,178	409,931	162,104	2,599,070	83,734	245,504	114,058
91 TEMPLE UNIVERSITY	19,613	2	1,672E	17	66	14,839E	184	1,765E	68
92 CLEMSON UNIVERSITY	18,366	4,631	722	0	182	12,030	0	801	0
93 VIRGINIA COMMONWLTH UNIV	18,119	0	268	0	31	17,710	21	89	0
94 BROWN UNIVERSITY	17,950	3,800	3,400	2,100	1,900	5,700	500	550	0
95 WEST VIRGINIA UNIVERSITY	17,510	4,877	546	670	74	8,832	36	2,475	0
96 GEORGETOWN UNIVERSITY	17,502	0	965	0	0	10,615	0	19	5,903
97 UNIV OF RHODE ISLAND	16,932E	2,820I	339I	11,385I	0	1,951I	0	437I	0
98 UNIVERSITY OF DELAWARE	16,746	4,610	1,622	3,109	373	3,653	194	527	2,658
99 UNIV OF MASS AT AMHERST	16,624	1,901	4,328	2,524	660	5,526	757	928	0
100 SYRACUSE UNIVERSITY	16,517	4,373	2,021	274	1,125	2,670	325	5,267	462
TOTAL, 1ST 100 INSTS.	5,032,228	725,884	560,061	429,910	166,515	2,682,596	85,751	258,362	123,149

SEE FOOTNOTES AT END OF TABLE.

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TABLE B-19. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 U TEX MED BRNCH GALVESTON	16,041	0	0	0	0	16,041	0	0	0
102 UNIV OF OKLAHOMA NORMAN	15,805	2,640	1,694	7,462	65	1,147	249	2,548	0
103 EMORY UNIVERSITY	15,725	0	848	2	19	14,672	65	119	0
104 INST OF AGRI UNIV OF TENN	15,711I	0	0	0	0	15,711I	0	0	0
105 UNIV OF VT & ST AGRIC COL	15,685	315	766	37	59	14,062	147	190	119
106 UNIV OF MD BALT PROF SCH	15,088	0	0	0	0	15,019	0	69	0
107 RENSSELAER POLYTECH INST	14,824	10,556	2,387	0	563	427	42	167	682E
108 UNIVERSITY OF DENVER	14,743	4,784	2,381	0	162	278	853	4,278	2,007
109 UNIV OF ILL MED CTR CHGO	14,644	0	0	0	0	14,644	0	0	0
110 UNIV OF MAINE ORONO	14,339	1,230	872	2,826	146	7,552	65	1,402	246
TOTAL, 1ST 110 INSTS.	5,184,833	745,409	569,009	440,237	167,529	2,792,149	87,172	267,125	126,203
111 U TEX HLTH SCI CTR S ANTO	13,972	0	0	0	0	13,972	0	0	0
112 UNIV OF CAL SANTA BARBARA	13,967	881	3,695	3,112	660	1,399	643	2,342	1,235E
113 MONTANA STATE UNIVERSITY	13,737	2,107	1,364	761	44	8,365	0	1,076	0
114 UNIVERSITY OF IDAHO	13,721	897	411	801	3	10,214	0	1,243	152
115 TEXAS TECH UNIVERSITY	13,032	5,685	642	647	157	5,103	224	333	41
116 NORTH DAKOTA STATE UNIV	12,984	57	330	46	23	12,277	165	92	0
117 UNIV OREGON HLTH SCI CTR	12,854	0	0	0	0	12,753	101	0	0
118 U TENNESSEE KNOXVILLE	12,742E	4,266I	1,639I	689I	137I	3,248I	485I	2,278I	0
119 U OF HOUSTON CENTRAL CAM	12,628	5,587	2,106	768	157	2,185	1,090	538	197
120 TULANE UNIVERSITY	12,426	643	152	7	182	10,895	206	171	170
TOTAL, 1ST 120 INSTS.	5,316,996	765,532	579,548	447,082	168,692	2,862,560	90,086	275,198	127,998
121 COL OF MED & DENT OF N J	12,394	0	0	0	0	12,394	0	0	0
122 UNIV OF P R-MAYAGUEZ	12,162	135	10	224	0	11,793	0	0	0
123 TUFTS UNIVERSITY	11,783	615	644	0	44	10,068	217	175	0
124 HOWARD UNIVERSITY	11,658	1,095	1,537	0	52	7,390	29	1,546	9
125 ALBANY MEDICAL COLLEGE	11,420	0	0	0	0	11,420	0	0	0
126 U TEX HLTH SCI CTR HOUSTN	11,340	0	0	210	0	10,888	0	242	0
127 UNIVERSITY OF WYOMING	11,049	914	1,355	3,170	23	4,166	71	939	411
128 SUNY DOWNSTATE MED CTR	10,799	0	0	0	0	10,799	0	0	0
129 MEDICAL COLLEGE OF WIS	10,655	0	0	0	0	10,655	0	0	0
130 UNIV OF NEW HAMPSHIRE	10,112	780	2,158	1,929	45	3,817	59	194	1,140
TOTAL, 1ST 130 INSTS.	5,430,269	769,071	585,272	452,615	169,056	2,955,950	90,482	279,294	129,588
131 DARTMOUTH COLLEGE	9,579	1,124	755	302	56	7,002	238	101	0
132 BRANDEIS UNIVERSITY	9,566	0	1,607	0	231	5,284	283	2,161	0
133 THOMAS JEFFERSON UNIV	9,532E	0	0	0	0	9,532E	0	0	0
134 UNIV TENN CTR HEALTH SCI	9,529	0	0	0	0	9,529	0	0	0
135 LEHIGH UNIVERSITY	9,413	4,488	2,160	461	697	196	12	691	708
136 UNIVERSITY OF OREGON MAIN	9,104	0	2,484	785	157	1,493	940	713	2,532
137 UNIV OF ILL CHICAGO CIR	8,915	1,927	1,993	545	769	1,115	199	2,317	53
138 UNIVERSITY OF NOTRE DAME	8,845	2,412	4,482	17	118	1,327	98	14	377
139 RUSH UNIVERSITY	8,815	0	0	0	0	8,572	243	0	0
140 MED UNIV OF SO CAROLINA	8,615	0	0	0	0	8,615	0	0	0
TOTAL, 1ST 140 INSTS.	5,522,183	779,022	598,753	454,725	171,084	3,008,615	92,475	284,251	133,258
141 ST JOHN'S UNIVERSITY (NY)	8,519	0	1,174	0	2,003	1,464	710	3,158	0
142 MICHIGAN TECH UNIVERSITY	8,483	4,850	1,032	437	75	1,846	0	243	0
143 SOUTH DAKOTA STATE UNIV	8,129	504	64	51	0	6,028	0	532	950
144 RICE UNIVERSITY	8,029	1,537	3,829	603	437	1,523	93	37	0
145 UNIVERSITY OF MISSISSIPPI	7,976	845	372	108	0	6,337	72	192	0
146 UNIV OF CAL SANTA CRUZ	7,844	0	3,386	1,007	600	2,147	258	396	50
147 UNIV OF NEVADA - RENO	7,811	1,744	239	444	0	4,875	204	305	0
148 U OF NEB MED CTR AT OMAHA	7,419	0	0	0	0	7,419	0	0	0
149 N MEX INST MINING & TECH	7,312	5,076	133	1,994	59	49	1	0	0
150 UNIV OF OKLA HLTH SCI CTR	7,214	0	0	0	788	6,126	320	0	0
TOTAL, 1ST 150 INSTS.	5,600,919	793,598	608,982	459,369	175,026	3,046,429	94,133	289,124	134,258

SEE FOOTNOTES AT END OF TABLE.

TABLE B-19. -- RED EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
151 UNIV OF WIS-MILWAUKEE	7,029	896	1,268	1,549	68	325	129	1,626	1,068
152 ARIZONA STATE UNIVERSITY	6,933	1,192	1,973	864	31	1,601	262	1,015	0
153 POLYTECHNIC INST OF N Y	6,814E	5,671E	958E	0	62E	32E	0	91E	0
154 SUNY AT ALBANY	6,711E	0	1,947E	2,328E	167E	1,340E	459E	470E	0
155 ST LOUIS UNIVERSITY	6,695E	42	39	672	0	5,554	116	272	0
156 UNIV OF SOUTH CAROLINA	6,599E	632E	1,098E	1,691E	219	2,150E	265E	544E	0
157 SOUTHERN ILL U-CARBONDALE	6,583	186	311	1,121	26	2,326	164	1,262	1,193
158 UNIVERSITY OF LOUISVILLE	6,499	510	444	38	38	4,588	168	532	171
159 UNIV OF MISSOURI ROLLA	6,421	4,517	1,506	203	172	7	1	4	11
160 SUNY UPSTATE MEDICAL CTR	6,345E	0	0	0	0	6,345E	0	0	0
TOTAL, 1ST 150 INSTS.	5,667,549	807,344	618,526	467,835	175,809	3,070,697	95,697	294,940	136,701
161 US NAVAL POSTGRAD SCHOOL	6,314	2,515	745	1,264	699	0	152	939	0
162 UNIV OF TEXAS AT DALLAS	6,038	0	3,651	711	198	1,181	110	197	0
163 WAKE FOREST UNIVERSITY	5,972E	0	61	0	0	5,703E	0	153E	55E
164 SUNY COL OF ENV SCI & FOR	5,699	1,415	640	1,362	0	2,282	0	0	0
165 NORTHEASTERN UNIVERSITY	5,669I	1,681I	1,982I	0	126I	571I	536I	547I	226I
166 UNIV OF CENTRAL FLORIDA	5,582	4,274	155	2	95	456	357	243	0
167 U OF CAL SYS WIDE PROGS	5,559	21	69	0	0	4,451	0	285	742
168 U OF ARKANSAS MED SCI CAM	5,511	0	0	0	0	5,511	0	0	0
169 MEDICAL COL OF GEORGIA	5,476	0	0	0	0	5,476	0	0	0
170 DESERT RESEARCH INSTITUTE	5,443	0	0	4,855	0	362	0	226	0
TOTAL, 1ST 170 INSTS.	5,724,821	817,250	625,829	476,029	176,917	3,096,690	96,852	297,530	137,724
171 BOSTON COLLEGE	5,430	0	1,393	1,264	1,863	313	164	443	0
172 DREXEL UNIVERSITY	5,367	2,541	1,909	0	379	372	81	85	0
173 MED COL OF OHIO AT TOLEDO	5,362	0	0	0	0	5,362	0	0	0
174 NEW YORK MEDICAL COLLEGE	5,233E	0	0	0	0	5,233E	0	0	0
175 UNIVERSITY OF N DAKOTA	4,979E	1,624I	329I	756I	0	1,882I	0	332I	86I
176 NC AG & TECH STATE UNIV	4,959	338I	235I	0	26I	2,423I	0	1,947I	0
177 WRIGHT STATE UNIVERSITY	4,923	174	1,029	154	135	3,200	61	6	160
178 UNIV OF SOUTH FLORIDA	4,771	619	328	531	127	2,174	113	879	0
179 COLORADO SCHOOL OF MINES	4,510	2,434	117	1,252	79	0	0	198	430
180 SUNY AT BINGHAMTON	4,504	0	741	349	187	1,145	485	1,597	0
TOTAL, 1ST 180 INSTS.	5,774,969	824,994	631,900	480,335	179,713	3,118,794	97,756	302,987	138,400
181 SAN DIEGO STATE UNIV	4,417	58	691	112	40	1,617	251	255	1,403
182 UNIV OF WEST FLORIDA	4,333	0	166	356	333	36	810	2,632	0
183 STEVENS INSTITUTE OF TECH	4,130	2,806	837	87	3	0	352	45	0
184 LOMA LINDA UNIVERSITY	4,091E	0	0	0	779E	2,895E	417E	0	0
185 HAHNEMANN MED COL & HOSP	4,072E	0	0	0	0	3,744E	326E	0	0
186 BRIGHAM YOUNG UNIVERSITY	4,002E	1,487E	932E	0	0	1,435E	11E	137E	0
187 NORTHERN ILLINOIS UNIV	3,899	0	1,019	558	627	526	146	1,022	0
188 WORCESTER POLY INSTITUTE	3,696	2,794	305	0	26	293	0	278	0
189 U MASS MED SCHL WORCESTER	3,676	0	0	0	0	3,676	0	0	0
190 INSTITUTE PAPER CHEMISTRY	3,664E	1,686E	760E	682E	69E	467E	0	0	0
TOTAL, 1ST 190 INSTS.	5,814,946	833,805	636,610	482,130	181,590	3,133,483	100,069	307,356	139,803
191 CLARKSON COLLEGE OF TECH	3,624	1,950	1,449	0	210	9	0	6	0
192 CUNY CITY COLLEGE	3,565	1,019	1,702	198	108	534	4	0	0
193 UNIV OF ARK PINE BLUFF	3,564	47	203	0	510	1,550	0	765	489
194 UNIV OF MO CENTRAL OFF	3,541	1,326	0	953	0	1,183	0	79	0
195 LOYOLA UNIV - CHICAGO	3,532I	0	70I	0	0	3,048I	269I	145I	0
196 NORTH TEXAS STATE UNIV	3,456E	0	927E	977E	31E	235E	0	1,059E	227E
197 UNIVERSITY OF NEW ORLEANS	3,447	55	829	4	423	1,806	63	467	0
198 UNIV OF P R-MED SCI CAMPUS	3,342I	0	0	0	0	3,342I	0	0	0
199 OREGON GRADUATE CENTER	3,210	317	1,732	911	0	250	0	0	0
200 OHIO UNIVERSITY	3,187	1,521	883	42	51	471	127	92	0
TOTAL, 1ST 200 INSTS.	5,849,314	840,040	644,205	485,215	182,923	3,145,911	100,532	309,969	140,519
TOTAL, ALL OTHER INSTS.	200,011	22,560	35,453	20,849	9,017	64,776	10,487	31,481	5,388

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-20. -- FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	4,092,569	594,547	555,332	371,414	137,997	2,091,936	81,036	182,097	78,310
1 JOHNS HOPKINS UNIVERSITY	239,855	54,772	47,465	26,856	41,788	61,481	886	2,006	4,601
2 MASS INST OF TECHNOLOGY	138,400	57,399	42,074	8,593	7,200	16,170	2,449	2,902	1,613
3 UNIV OF CAL SAN DIEGO	111,038	1,953	19,473	52,191	430	35,129	706	437	719E
4 STANFORD UNIVERSITY	102,645	29,473	16,723	1,435	6,406	43,328	1,510	3,770	0
5 UNIVERSITY OF WASHINGTON	93,109	4,258	5,161	14,962	869	57,659	1,176	1,014	8,010
6 UNIV OF WIS-MADISON	89,350	6,515	10,963	8,528	3,248	44,556	5,169	9,550	791
7 COLUMBIA UNIV MAIN DIV	83,729	4,079	9,882	17,638	573	47,418	415	3,724	0
8 HARVARD UNIVERSITY	76,377	2,129	10,160	4,199	1,378	50,412	1,351	5,575	1,173
9 UNIVERSITY OF MICHIGAN	75,549	9,630	5,832	8,657	773	34,632	2,292	13,733	0
10 CORNELL UNIVERSITY	70,533	11,869	15,405	3,268	1,351	34,392	912	3,380	6
TOTAL, 1ST 10 INSTS.	1,080,635	182,077	183,138	146,327	64,016	425,177	16,866	45,121	16,913
11 UNIV OF PENNSYLVANIA	70,553	3,382	8,108	417	2,389	44,947	1,058	7,698	2,554
12 UNIV OF CAL LOS ANGELES	70,355	6,810	10,883	5,312	628	39,552	2,780	4,400	0
13 UNIVERSITY OF MINNESOTA	69,463	5,338	5,337	1,110	902	50,061	3,304	2,225	186
14 UNIV OF CAL BERKELEY	64,127	15,975	14,627	1,916	1,582	23,282	1,906	4,626	213
15 YALE UNIVERSITY	63,572	2,420	6,927	718	1,867	48,367	911	2,362	0
16 UNIV OF CAL SAN FRANCISCO	61,172	0	1,771	0	0	58,202	0	1,199	0
17 UNIV OF ILL URBANA	52,327	14,696	8,877	3,927	2,419	16,128	1,594	3,658	1,028
18 UNIVERSITY OF CHICAGO	50,118	0	13,328	1,969	1,002	31,639	648	1,532	0
19 UNIV OF SOUTHERN CAL	50,001	16,074	2,676	4,301	204	21,642	1,938	3,166	0
20 UNIV OF TEXAS AT AUSTIN	49,666	5,121	13,118	5,627	1,424	5,551	1,146	2,142	14,537
TOTAL, 1ST 20 INSTS.	1,679,999	251,893	268,790	171,624	76,433	784,548	32,151	79,129	35,431
21 UNIVERSITY OF COLORADO	49,632	1,632	10,742	4,781	482	26,399	2,597	1,870	129
22 WASHINGTON UNIVERSITY	47,756	2,448	1,974	666	3,813	37,757	672	426	0
23 PENNSYLVANIA STATE UNIV	45,001	18,892	3,217	4,515	444	16,016	119	1,263	535
24 UNIVERSITY OF ROCHESTER	43,890	8,889	5,258	27	722	27,688	792	348	166
25 NEW YORK UNIVERSITY	43,705	50	2,360	294	4,778	32,756	556	1,778	1,133
26 OHIO STATE UNIVERSITY	43,555	6,858	3,826	943	820	18,853	593	1,718	6,944
27 CALIFORNIA INST OF TECH	38,333	7,738	17,011	6,341	1,524	5,317	0	399	0
28 PURDUE UNIVERSITY	33,041	14,096	5,817	764	1,322	13,604	292	2,087	59
29 DUKE UNIVERSITY	36,155	1,219	2,523	938	357	29,339	588	1,201	0
30 UNIVERSITY OF ARIZONA	35,[illegible]	3,411	10,111	3,787	549	15,696	61	1,351	593
TOTAL, 1ST 30 INSTS.	2,097,63[illegible]	317,126	331,629	194,680	91,244	997,973	38,421	91,570	44,990
31 UNIV OF CAL DAVIS	35,078	2,022	2,198	340	55	29,344	149	853	107
32 MICHIGAN STATE UNIVERSITY	34,830	1,033	2,849	1,157	491	22,289	806	4,153	2,052
33 UNIVERSITY OF IOWA	33,603	1,608	6,192	16	369	24,632	506	280	0
34 GEORGIA INSTITUTE OF TECH	32,827	22,663	3,290	1,393	2,485	341	78	2,321	256
35 NORTHWESTERN UNIVERSITY	31,971	4,575	3,363	291	349	17,383	886	613	4,511
36 TEXAS A & M UNIVERSITY	31,860	8,698	3,956	4,961	480	12,970	0	795	0
37 UNIVERSITY OF UTAH	31,588	6,589	3,363	2,395	964	17,946	136	195	0
38 UNIV OF NC AT CHAPEL HILL	31,583	0	2,339	1,761	711	24,233	283	1,730	523
39 YESHIVA UNIVERSITY	31,540	0	27	0	59	31,214	0	240	0
40 BAYLOR COL OF MEDICINE	31,211	0	0	0	0	31,211	0	0	0
TOTAL, 1ST 40 INSTS.	2,423,721	364,314	359,206	206,994	97,207	1,199,536	41,265	102,760	52,439
41 CASE WESTERN RESERVE UNIV	29,721	7,804	2,821	297	55	18,483	138	123	0
42 UNIVERSITY OF MIAMI	29,268	897	159	8,336	93	19,472	208	7	96
43 COLORADO STATE UNIVERSITY	29,499	7,952	2,074	2,071	447	13,279	321	1,561	783
44 UNIVERSITY OF CONNECTICUT	27,513	2,503	1,653	602	433	19,315	2,249	755	0
45 UNIV OF ALASKA FAIRBANKS	26,537	221	855	20,997	0	3,804	0	660	50
46 UNIV OF HAWAII-MANOA	25,333	1,543	5,655	7,320	143	8,256	93	359	2,464
47 UNIV ALABAMA BIRMINGHAM	25,171	32	22	0	19	25,098	0	0	0
48 WOODS HOLE OCNGRPHIC INST	25,042	3,241	0	21,801	0	0	0	0	0
49 OREGON STATE UNIVERSITY	24,669	1,633	984	7,924	230	12,738	0	991	169
50 UNIVERSITY OF FLORIDA	23,627E	5,296E	1,987E	168F	239E	14,750E	521E	665E	1E
TOTAL, 1ST 50 INSTS.	2,689,637	395,436	375,416	276,510	98,866	1,334,731	44,795	107,891	56,002

SEE FOOTNOTES AT END OF TABLE.

TABLE B-23. -- FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1990

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIVERSITY OF VIRGINIA	23,636	5,085	2,691	1,404	365	13,105	469	497	0
52 UNIVERSITY OF PITTSBURGH	23,327	2,675	3,949	901	711	14,202	368	250	271
53 UNIV OF MD COLLEGE PARK	23,174	2,292	12,658	480	1,805	4,448	644	778	69
54 INDIANA UNIV	22,278	39	7,591	409	408	11,237	989	732	903
55 BOSTON UNIVERSITY	22,238	227	1,417	111	97	18,909	154	615	708
56 NEW MEXICO STATE UNIV	21,718	18,945	859	633	152	842	152	91	44
57 CUNY MT SINAI SCH OF MED	21,182	0	0	0	22	21,160	0	0	0
58 PRINCETON UNIVERSITY	20,995	5,411	[illegible]	2,020	1,375	2,431	1,084	1,771	0
59 U TEX HLTH SCI CTR DALLAS	20,871	0	0	0	19	20,852	0	0	0
60 UNIV OF CAL IRVINE	20,211	679	4,796	0	142	13,516	0	1,076	2
TOTAL, 1ST 60 INSTS.	2,909,137	430,789	414,180	282,468	103,962	1,455,433	48,655	1,3.651	97,999
61 CARNEGIE-MELLON UNIV	19,645	5,150	3,291	338	4,906	2,447	812	1,974	727
62 ROCKEFELLER UNIVERSITY	19,290	0	1,212	0	216	15,964	1,898	0	0
63 UNIVERSITY OF NEW MEXICO	19,024	6,208	641	546	97	11,032	87	413	0
64 UNIV OF TEX CANCER CENTER	19,471	0	963	0	1,667	15,851	0	0	0
65 SUNY AT STONY BROOK	19,460	1,137	4,737	2,676	641	8,265	421	543	40
66 UNIVERSITY OF DAYTON	17,988	10,792	4,176	130	2,018	324	1	94	453
67 UNIVERSITY OF GEORGIA	17,953	159	750	1,202	722	13,654	242	1,214	0
68 IOWA ST U OF SCI & TECH	16,919	3,270	725	332	532	9,368	140	1,714	738
69 GEORGE WASHINGTON UNIV	16,780	3,097	421	970	1,181	9,004	170	1,393	954
70 UNIVERSITY OF KANSAS	16,676	1,816I	1,477I	393I	205I	8,047I	4,457I	281I	0I
TOTAL, 1ST 70 INSTS.	3,093,243	462,418	434,563	288,655	116,147	1,549,389	56,883	121,277	60,911
71 VANDERBILT UNIVERSITY	16,499	290	1,058	75	31	14,259	421	364	0
72 VA POLYTECH INST & ST U	16,330	5,259	1,796	1,959	295	6,350	112	609	0
73 RUTGERS THE ST UNIV OF NJ	16,159	1,166	3,025	545	1,525	4,606	1,510	3,769	13
74 UNIVERSITY OF CINCINNATI	16,041	1,468	574	113	76	13,705	0	10	95
75 LOUISIANA STATE UNIV	15,868	1,023	1,736	4,921	99	7,913	128	48	0
76 SUNY AT BUFFALO	15,664	1,690	1,413	595	462	10,302	176	1,003	23
77 N C STATE UNIV AT RALEIGH	15,611	4,137	826	1,521	415	8,451	30	231	0
78 BROWN UNIVERSITY	15,375	3,100	3,000	1,900	1,870	4,500	500	505	0
79 UTAH STATE UNIVERSITY	14,819	4,284	425	4,245	29	4,966	75	663	132
80 VIRGINIA COMMONWLTH UNIV	14,675	0	234	0	31	14,381	21	8	0
TOTAL, 1ST 80 INSTS.	3,247,333	484,835	448,650	304,529	120,980	1,638,822	59,856	129,487	61,174
81 UNIV OF RHODE ISLAND	13,847	1,555I	339I	10,379I	0	1,445I	0	119I	0
82 TEMPLE UNIVERSITY	13,686	0	1,492	0	66	11,593	115	633	68
83 UNIV OF MISSOURI COLUMBIA	13,603	695	484	413	58	10,604	135	1,196	14
84 EMORY UNIVERSITY	13,558	0	711	1	14	12,657	62	113	0
85 UNIV OF MD BALT PROF SCH	13,322	0	0	0	0	13,253	0	69	0
86 UNIVERSITY OF KENTUCKY	13,093	2,348	306	458	203	9,499	0	279	0
87 WAYNE STATE UNIVERSITY	12,196	1,623	1,909	0	175	8,651	74	341	28
88 WASHINGTON STATE UNIV	11,855	1,626	1,166	238	144	8,217	8	456	0
89 UNIV OF VT & ST AGRIC COL	11,640	160	687	24	59	10,412	115	118	65
90 OKLAHOMA STATE UNIVERSITY	11,107	4,121I	898I	66I	95I	5,050I	17I	148I	712I
TOTAL, 1ST 90 INSTS.	3,375,240	496,373	456,637	316,117	121,794	1,729,917	60,[illegible]82	131,959	62,061
91 UNIV OF CAL SANTA BARBARA	11,073	735	3,339	2,173	481	1,246	610	1,740	754
92 UNIVERSITY OF DENVER	10,786	4,066	2,024	0	137	236	725	3,598	0
93 U TEX MED BRNCH GALVESTON	10,387	0	0	0	0	10,387	0	0	0
94 UNIV OF NEBRASKA-LINCOLN	10,380	594	2,602	1,716	44	4,311	130	983	0
95 UNIV OF ILL MED CTR CHGO	10,329	0	0	0	0	10,329	0	0	0
96 U TEX HLTH SCI CTR S ANTO	10,158	0	0	0	0	10,158	0	0	0
97 TUFTS UNIVERSITY	10,059	606	658	0	31	8,430	201	133	0
98 UNIV OF MASS AT AMHERST	9,871	1,124	3,442	815	504	2,829	575	582	0
99 GEORGETOWN UNIVERSITY	9,558	0	923	0	0	7,574	0	0	1,061
100 WEST VIRGINIA UNIVERSITY	9,225	2,634	217	481	11	5,036	31	815	0
TOTAL, 1ST 100 INSTS.	3,477,071	506,132	469,842	321,302	123,002	1,790,493	62,654	139,810	63,876

SEE FOOTNOTES AT END OF TABLE.

TABLE B-23. -- FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 RENSSELAER POLYTECH INST	9,192	6,545	1,480	0	349	265	26	134	423
102 UNIVERSITY OF DELAWARE	9,183	2,554	1,246	1,789	300	1,913	115	190	1,183
103 U TENNESSEE KNOXVILLE	9,159E	2,697I	1,521I	645I	122I	2,770I	398I	1,026I	0
104 COL OF MED & DENT OF N J	9,095	0	0	0	0	9,095	0	0	0
105 UNIV OF CAL RIVERSIDE	8,952	0	1,545	389	81	5,352	204	263	1,048E
106 BRANDEIS UNIVERSITY	8,854	0	1,536	0	231	5,045	267	1,775	0
107 UNIV OREGON HLTH SCI CTR	8,836	0	0	0	0	8,755	81	0	0
108 MISSISSIPPI STATE UNIV	8,824	2,506	24	58	0	5,002	0	881	353
109 U TEX HLTH SCI CTR HOUSTN	8,811	0	0	93	0	8,493	0	225	0
110 KANS ST U - AG & APP SCI	8,677	1,347	675	293	161	3,893	19	278	2,011
TOTAL, 1ST 110 INSTS.	3,566,571	521,771	477,869	324,569	124,246	1,840,936	63,784	144,522	68,894
111 SYRACUSE UNIVERSITY	8,626	3,117	1,181	159	849	1,714	153	1,281	172E
112 FLORIDA STATE UNIVERSITY	8,501	0	2,486	2,090	420	2,051	783	620	51
113 DARTMOUTH COLLEGE	8,451	834	587	291	51	6,400	225	53	0
114 UNIV TENN CTR HEALTH SCI	8,182	0	0	0	0	8,182	0	0	0
115 HOWARD UNIVERSITY	8,172	578	1,317	0	45	5,521	18	693	0
116 TULANE UNIVERSITY	7,990	413E	98E	9E	117E	7,006E	132E	110E	109E
117 UNIVERSITY OF OREGON MAIN	7,893	0	2,215	965	154	1,376	908	525	2,170
118 UNIVERSITY OF MAINE ORNE	7,516	2,067	4,286	12	112	1,047	94	14	184
119 THOMAS JEFFERSON UNIV	7,739E	0	0	0	0	7,739E	0	0	0
120 UNIV OF OKLAHOMA NORMAN	7,634	1,277	820	3,606	33	553	122	1,223	0
TOTAL, 1ST 120 INSTS.	3,647,575	530,057	490,859	331,297	126,027	1,892,525	66,199	149,031	71,580
121 SUNY DOWNSTATE MED CTR	7,353	0	0	0	0	7,358	0	0	0
122 AUBURN UNIVERSITY	6,969	1,475	378	3	22	4,985	0	106	0
123 INST OF AGRI UNIV OF TENN	6,878I	0	0	0	0	6,878I	0	0	0
124 MED UNIV OF SO CAROLINA	6,774	0	0	0	0	6,774	0	0	0
125 MEDICAL COLLEGE OF WIS	6,664	0	0	0	0	6,664	0	0	0
126 MONTANA STATE UNIVERSITY	6,534	1,420	950	388	30	3,055	0	661	0
127 UNIVERSITY OF IDAHO	6,432	429	252	708	0	4,575	0	438	0
128 TEXAS TECH UNIVERSITY	5,363	3,457	451	62	129	1,790	187	287	0
129 US NAVAL POSTGRAD SCHOOL	6,246	2,515	745	1,196	699	0	152	939	0
130 UNIVERSITY OF WYOMING	6,233	627	995	2,436	18	1,285	71	640	161
TOTAL, 1ST 130 INSTS.	3,713,966	539,980	494,630	336,090	126,925	1,925,989	66,609	152,102	71,741
131 RUSH UNIVERSITY	6,195	0	0	0	0	5,963	232	0	0
132 UNIV OF NEW HAMPSHIRE	6,189	651	1,916	1,415	42	1,842	57	147	119
133 RICE UNIVERSITY	6,184	1,079	3,640	222	363	1,389	71	20	0
134 U OF HOUSTON CENTRAL CAM	6,154	2,191	1,086	370	33	1,509	607	354	4
135 ARIZONA STATE UNIVERSITY	5,939	806	1,836	751	27	1,465	237	817	0
136 CLEMSON UNIVERSITY	5,947	1,485	485	0	143	3,384	0	370	0
137 UNIV OF MAINE ORONO	5,825	490	435	1,473	64	2,733	37	593	0
138 UNIV OF CAL SANTA CRUZ	5,823	0	1,747	920	543	1,942	247	378	46
139 UNIV OF ILL CHICAGO CIR	5,722	1,523	1,499	171	420	808	143	1,106	52
140 ALBANY MEDICAL COLLEGE	5,351	0	0	0	0	5,351	0	0	0
TOTAL, 1ST 140 INSTS.	3,773,195	548,205	508,654	341,412	128,560	1,952,275	68,240	155,887	71,962
141 U OF NEB MED CTR AT OMAHA	5,213	0	0	0	0	5,213	0	0	0
142 SUNY AT ALBANY	5,205	0	1,638	1,472	155	1,210	382	349	0
143 ST LOUIS UNIVERSITY	5,139E	42	38	604	0	4,130	116	229	0
144 LEHIGH UNIVERSITY	5,131	2,747	1,084	297	368	41	0	393	201
145 MEDICAL COL OF GEORGIA	5,123	0	0	0	0	5,123	0	0	0
146 N MEX INST MINING & TECH	5,011	3,307E	119	1,531	14	40	0	0	0
147 UNIV OF P R-MAYAGUEZ	4,889	77	10	224	0	4,578	0	0	0
148 WAKE FOREST UNIVERSITY	4,889E	0	16	0	0	4,719E	0	153E	0
149 NC AG & TECH STATE UNIV	4,889E	338I	235I	0	26I	2,423I	0	1,866I	0
150 UNIV OF SOUTH CAROLINA	4,844E	436E	863E	1,520E	61E	1,068E	127E	169E	0
TOTAL, 1ST 150 INSTS.	3,823,527	555,152	510,657	347,060	129,184	1,981,420	68,865	159,026	72,163
TOTAL, ALL OTHER INSTS.	269,042	39,395	44,675	24,354	8,813	110,416	12,171	23,071	6,147

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 3-21. -- RED EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	3,827,971	505,153	376,078	361,856	80,763	2,097,839	71,915	233,892	110,475
1 UNIV OF WIS-MADISON	138,227	11,264	15,802	13,130	4,610	70,707	6,232	13,137	3,345
2 UNIV OF CAL SAN DIEGO	124,830	2,038	20,114	59,965	705	39,681	715	595	1,107
3 UNIVERSITY OF MINNESOTA	119,065	9,285	6,554	2,190	1,398	90,672	3,907	4,420	639
4 UNIVERSITY OF WASHINGTON	111,859	5,445	5,430	16,413	900	70,582	1,462	1,735	9,891
5 UNIVERSITY OF MICHIGAN	111,316	15,209	6,534	12,147	1,672	50,661	4,045	21,048	0
6 UNIV OF CAL BERKELEY	93,377	20,459	15,914	2,512	1,712	35,686	2,708	13,292	1,095E
7 UNIV OF CAL LOS ANGELES	88,934	7,528	11,063	6,721	663	51,424	2,934	8,604	0
8 UNIV OF ILL URBANA	83,274	20,385	10,800	7,405	5,384	26,237	2,039	8,761	2,263
9 UNIV OF TEXAS AT AUSTIN	78,621	10,362	15,932	13,452	2,996	8,381	1,494	5,338	17,666
10 UNIV OF CAL SAN FRANCISCO	73,426	0	1,799	0	5	70,400	0	1,222	0
TOTAL, 1ST 10 INSTS.	1,019,928	101,974	112,942	133,935	20,042	514,431	25,536	75,052	36,006
11 MICHIGAN STATE UNIVERSITY	72,354	2,363	3,913	2,542	678	50,566	1,891	5,531	3,870
12 PENNSYLVANIA STATE UNIV	71,940	25,411	3,991	7,181	4,475	26,245	236	2,417	1,884
13 TEXAS A & M UNIVERSITY	71,451	19,844	5,427	5,567	546	38,118	11	1,948	0
14 OHIO STATE UNIVERSITY	70,652	11,569	4,745	1,464	1,250	38,998	733	3,156	8,737
15 UNIVERSITY OF ARIZONA	69,035	6,238	15,505	12,105	802	29,390	157	3,985	943
16 UNIV OF CAL DAVIS	68,429	3,962	2,573	466	56	58,287	175	2,721	189
17 UNIVERSITY OF COLORADO	62,056	2,273	12,874	5,641	690	34,530	3,599	2,270	179
18 PURDUE UNIVERSITY	61,755	19,132	6,375	941	1,476	28,716	564	4,307	354
19 UNIVERSITY OF FLORIDA	56,656E	15,873E	3,591E	561E	449E	32,868E	938E	1,930E	466E
20 GEORGIA INSTITUTE OF TECH	56,653	39,112	5,678	2,404	4,288	588	134	4,006	443
TOTAL, 1ST 20 INSTS.	1,680,889	247,721	177,614	172,687	34,752	852,737	33,974	108,333	53,071
21 UNIVERSITY OF GEORGIA	55,595	1,517	1,743	2,149	1,347	41,341	842	6,656	0
22 LOUISIANA STATE UNIV	53,059	4,365	3,591	7,503	1,029	34,525	241	1,804	0
23 IOWA ST U OF SCI & TECH	49,459	9,101	1,508	1,033	2,175	26,983	343	3,108	5,208
24 OREGON STATE UNIVERSITY	44,713	2,881	1,360	10,176	776	27,148	0	1,982	390
25 UNIVERSITY OF CONNECTICUT	44,248	4,187	2,765	1,007	725	30,450	3,761	1,353	0
26 N C STATE UNIV AT RALEIGH	42,725	8,616	1,034	3,153	1,037	28,519	30	336	0
27 UNIV OF ALASKA FAIRBANKS	42,154	555	1,228	28,622	0	9,341	0	1,928	480
28 COLORADO STATE UNIVERSITY	43,679	10,755	2,386	2,249	649	20,326	339	2,426	1,538
29 UNIV OF HAWAII-MANOA	43,593	2,491	7,100	9,720	143	15,539	93	1,348	4,159
30 UNIV OF MD COLLEGE PARK	39,917	4,083	16,888	652	5,116	10,971	824	1,436	77
TOTAL, 1ST 30 INSTS.	2,134,029	296,282	217,217	238,951	47,749	1,097,780	40,447	130,680	64,923
31 UNIV OF NC AT CHAPEL HILL	38,924	0	2,378	3,060	744	27,897	287	3,411	1,149
32 UNIVERSITY OF IOWA	39,866	1,925	7,001	22	369	28,385	696	458	0
33 UNIVERSITY OF UTAH	37,175	8,311	3,858	2,859	1,313	20,396	180	258	0
34 RUTGERS THE ST UNIV OF NJ	35,335	2,317	3,961	2,859	3,014	13,785	2,365	6,326	1,708
35 UNIV OF TEX CANCER CENTER	34,920	0	1,672	0	3,046	30,202	0	0	0
36 UNIV OF MISSOURI COLUMBIA	34,623	1,649	627	643	75	27,879	478	3,124	145
37 VA POLYTECH INST & ST U	33,604	9,374	2,604	2,444	344	17,437	198	1,233	0
38 UNIV OF NEBRASKA-LINCOLN	32,607	2,258	3,334	4,865	244	19,536	308	2,052	0
39 UNIVERSITY OF PITTSBURGH	31,863	3,807	4,405	1,144	1,789	17,583	427	1,062	1,646
40 WASHINGTON STATE UNIV	31,533	3,560	1,490	285	170	23,663	37	542	1,791
TOTAL, 1ST 40 INSTS.	2,484,481	329,483	248,545	257,132	58,857	1,324,543	45,423	149,136	71,362
41 UNIV ALABAMA BIRMINGHAM	30,953	92	221	0	27	30,624	0	5	0
42 INDIANA UNIV	30,307	202	8,567	562	591	16,039	1,311	1,427	1,608
43 UNIVERSITY OF KENTUCKY	30,013	5,683	493	863	226	22,311	0	437	0
44 MISSISSIPPI STATE UNIV	29,035	3,272	120	85	76	22,935	0	2,018	529
45 UNIVERSITY OF CINCINNATI	28,991	2,483	783	223	88	24,737	11	37	529
46 KANS ST U - AG & APP SCI	27,793	3,193	893	671	204	16,001	36	597	6,198
47 UNIVERSITY OF VIRGINIA	27,297	5,629	2,935	1,680	369	14,869	499	1,172	144
48 U TEX HLTH SCI CTR DALLAS	26,585	0	0	0	19	26,567	0	0	0
49 SUNY AT STONY BROOK	26,133	1,435	6,251	3,900	900	11,704	734	786	493
50 NEW MEXICO STATE UNIV	25,613	21,510	963	1,215	211	1,179	178	306	56
TOTAL, 1ST 50 INSTS.	2,767,263	372,972	269,771	266,331	61,568	1,511,509	48,192	155,931	81,019

SEE FOOTNOTES AT END OF TABLE.

TABLE 9-21. -- R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIV OF CAL RIVERSIDE	24,951	0	1,647	652	297	19,733	213	395	2,024
52 UTAH STATE UNIVERSITY	24,611	6,293	569	4,886	75	9,716	137	1,538	1,397
53 UNIVERSITY OF NEW MEXICO	24,242	6,912	720	986	119	12,638	131	1,386	1,450
54 SUNY AT BUFFALO	23,437	2,690	1,986	750	775	15,511	221	1,374	130
55 OKLAHOMA STATE UNIVERSITY	23,417	5,891I	1,243I	272I	111I	13,342I	17I	1,339I	1,202I
56 UNIV OF CAL IRVINE	23,303	750	4,908	0	144	15,990	7	1,471	23
57 FLORIDA STATE UNIVERSITY	21,497	0	5,490	3,594	3,247	4,058	1,594	3,183	331
58 UNIV OF ARK FAYETTEVILLE	21,126	4,108E	4,167E	406F	36E	6,439E	0	3,954E	2,006E
59 WAYNE STATE UNIVERSITY	20,813	2,724	2,550	8	527	13,382	246	1,210	171
60 AUBURN UNIVERSITY	20,248	2,838	571	5	22	16,636	0	176	0
TOTAL, 1ST 60 INSTS.	2,994,923	405,198	293,622	277,790	66,921	1,638,954	50,758	171,937	89,753
61 UNIVERSITY OF KANSAS	19,869	2,088I	1,602I	1,506I	223I	8,542I	5,008I	757I	143I
62 TEMPLE UNIVERSITY	19,623	2	1,672E	17	66	14,839E	184	1,765E	68
63 CLEMSON UNIVERSITY	12,366	4,631	772	0	192	12,030	0	831	0
64 VIRGINIA COMMONWLTH UNIV	18,119	0	268	0	31	17,710	21	89	0
65 WEST VIRGINIA UNIVERSITY	17,513	4,877	546	670	74	8,932	36	2,475	0
66 UNIV OF RHODE ISLAND	16,932E	2,820I	339I	11,385I	0	1,951I	0	437I	0
67 UNIVERSITY OF DELAWARE	16,746	4,610	1,622	3,109	373	3,653	194	527	2,658
68 UNIV OF MASS AT AMHERST	16,624	1,901	4,328	2,524	660	5,526	757	928	0
69 U TEX MED BRNCH GALVESTON	16,041	0	0	0	0	16,041	0	0	0
70 UNIV OF OKLAHOMA NORMAN	15,905	2,640	1,694	7,462	65	1,147	249	2,548	0
TOTAL, 1ST 70 INSTS.	3,169,549	428,757	306,415	304,463	68,595	1,729,225	57,207	182,254	92,622
71 INST OF AGRI UNIV OF TENN	15,711I	0	0	0	0	15,711I	0	0	0
72 UNIV OF VT & ST AGRIC COL	15,685	315	766	37	59	14,062	147	180	119
73 UNIV OF MD BALT PROF SCH	15,088	0	0	0	0	15,019	0	59	0
74 UNIV OF ILL MED CTR CHGO	14,644	0	0	0	0	14,644	0	0	0
75 UNIV OF MAINE ORONO	14,339	1,230	872	2,826	146	7,552	65	1,432	216
76 U TEX HLTH SCI CTR S ANTO	13,972	0	0	0	0	13,972	0	0	0
77 UNIV OF CAL SANTA BARBARA	13,967	881	3,695	3,112	660	1,399	643	2,342	1,235E
78 MONTANA STATE UNIVERSITY	13,737	2,107	1,364	781	44	8,365	0	1,076	0
79 UNIVERSITY OF IDAHO	13,721	897	411	801	3	10,214	0	1,243	152
80 TEXAS TECH UNIVERSITY	13,032	5,695	842	647	157	5,103	224	333	41
TOTAL, 1ST 80 INSTS.	3,313,444	439,872	314,365	312,667	69,664	1,835,266	58,286	188,909	94,415
81 NORTH DAKOTA STATE UNIV	12,934	57	330	40	23	12,277	165	92	0
82 UNIV OREGON HLTH SCI CTR	12,854	0	0	0	0	12,753	101	0	0
83 U TENNESSEE KNOXVILLE	12,742E	4,266I	1,639I	689I	137I	3,248I	485I	2,278I	0
84 U OF HOUSTON CENTRAL CAM	12,628	5,597	2,106	76F	157	2,185	1,090	538	197
85 COL OF MED & DENT OF N J	12,394	0	0	0	0	12,394	0	0	0
86 UNIV OF P R-MAYAGUEZ	12,152	135	10	224	0	11,793	0	0	0
87 U TEX HLTH SCI CTR HOUSTN	11,340	0	0	210	0	10,888	0	242	0
88 UNIVERSITY OF WYOMING	11,049	914	1,355	3,170	23	4,166	71	909	441
89 SUNY DOWNSTATE MED CTR	10,799	0	0	0	0	10,799	0	0	0
90 UNIV OF NEW HAMPSHIRE	10,112	780	2,158	1,929	45	3,917	59	134	1,140
TOTAL, 1ST 90 INSTS.	3,432,503	451,611	321,563	319,697	70,049	1,919,586	60,257	193,152	96,193
91 UNIV TENN CTR HEALTH SCI	9,529	0	0	0	0	9,529	0	0	0
92 UNIVERSITY OF OREGON MAIN	9,104	0	2,484	785	157	1,493	940	713	2,532
93 UNIV OF ILL CHICAGO CIR	8,918	1,927	1,993	545	769	1,115	199	2,317	53
94 MED UNIV OF SO CAROLINA	8,615	0	0	0	0	8,615	0	0	0
95 MICHIGAN TECH UNIVERSITY	8,483	4,850	1,032	437	75	1,846	0	243	0
96 SOUTH DAKOTA STATE UNIV	8,129	504	64	51	0	6,028	0	532	950
97 UNIVERSITY OF MISSISSIPPI	7,976	895	372	108	0	6,337	72	192	0
98 UNIV OF CAL SANTA CRUZ	7,844	0	3,38[illegible]	1,007	600	2,147	258	396	50
99 UNIV OF NEVADA - RENO	7,811	1,744	239	444	0	4,875	204	305	0
100 U OF NEB MED CTR AT OMAHA	7,419	0	0	0	0	7,419	0	0	0
TOTAL, 1ST 100 INSTS.	3,516,384	461,531	331,533	323,074	71,650	1,968,990	61,930	197,850	99,778
TOTAL, ALL OTHER INSTS.	311,635	43,632	44,545	38,782	[illegible],113	118,849	9,985	35,032	10,697

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-22. -- FEDERALLY FINANCED R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	2,347,737	308,443	289,353	249,797	42,720	1,231,646	52,206	115,436	57,136
1 UNIV OF CAL SAN DIEGO	111,033	1,953	19,473	52,191	430	35,129	706	437	719E
2 UNIVERSITY OF WASHINGTON	93,109	4,258	5,161	14,962	869	57,659	1,176	1,014	8,010
3 UNIV OF WIS-MADISON	89,350	6,515	10,963	8,528	3,248	44,556	5,169	9,590	791
4 UNIVERSITY OF MICHIGAN	75,549	9,630	5,232	8,657	773	34,632	2,292	13,733	0
5 UNIV OF CAL LOS ANGELES	70,365	6,810	10,883	5,312	628	39,552	2,780	4,400	0
6 UNIVERSITY OF MINNESOTA	69,453	5,338	5,337	1,110	902	50,061	3,304	2,225	186
7 UNIV OF CAL BERKELEY	64,127	15,975	14,627	1,916	1,582	23,282	1,906	4,626	213
8 UNIV OF CAL SAN FRANCISCO	61,172	0	1,771	0	0	58,202	0	1,199	0
9 UNIV OF ILL URBANA	52,327	14,696	8,877	3,927	2,419	16,128	1,594	3,658	1,028
10 UNIV OF TEXAS AT AUSTIN	49,666	5,121	13,118	5,627	1,424	5,551	1,146	2,142	14,537
TOTAL, 1ST 10 INSTS.	736,166	70,296	96,042	102,230	12,275	364,752	20,073	43,014	25,484
11 UNIVERSITY OF COLORADO	49,632	1,632	10,742	4,781	482	26,399	2,597	1,870	129
12 PENNSYLVANIA STATE UNIV	45,001	18,892	3,217	4,515	444	16,016	119	1,263	535
13 OHIO STATE UNIVERSITY	43,555	6,858	3,626	943	820	18,853	593	1,718	6,944
14 PURDUE UNIVERSITY	38,041	14,696	5,817	764	1,322	13,604	292	2,097	59
15 UNIVERSITY OF ARIZONA	35,559	3,411	10,111	3,787	549	15,696	61	1,351	593
16 UNIV OF CAL DAVIS	35,073	2,022	2,198	340	55	29,344	149	863	107
17 MICHIGAN STATE UNIVERSITY	34,833	1,033	2,849	1,157	491	22,289	806	4,153	2,052
18 UNIVERSITY OF IOWA	33,633	1,608	6,192	16	369	24,632	506	280	0
19 GEORGIA INSTITUTE OF TECH	32,927	22,663	3,290	1,393	2,485	341	78	2,321	256
20 TEXAS A & M UNIVERSITY	31,863	8,698	3,950	4,961	480	12,970	0	795	0
TOTAL, 1ST 20 INSTS.	1,110,152	151,209	148,240	124,987	19,772	544,896	25,274	59,715	36,159
21 UNIVERSITY OF UTAH	31,538	6,589	3,363	2,399	964	17,946	136	195	0
22 UNIV OF NC AT CHAPEL HILL	31,503	0	2,339	1,761	711	24,233	283	1,730	523
23 COLORADO STATE UNIVERSITY	29,488	7,952	2,074	2,071	447	13,279	321	1,561	783
24 UNIVERSITY OF CONNECTICUT	27,510	2,503	1,693	602	433	19,315	2,249	755	0
25 UNIV OF ALASKA FAIRBANKS	26,587	221	855	20,997	0	3,804	0	660	50
26 UNIV OF HAWAII-MANOA	25,933	1,543	5,655	7,320	143	8,256	93	359	2,464
27 UNIV ALABAMA BIRMINGHAM	25,171	32	22	0	19	25,098	0	0	0
28 OREGON STATE UNIVERSITY	24,869	1,633	984	7,924	230	12,738	0	991	169
29 UNIVERSITY OF FLORIDA	23,627E	5,296E	1,987E	168E	239E	14,750E	521E	655E	1E
30 UNIVERSITY OF VIRGINIA	23,606	5,085	2,691	1,404	365	13,105	469	487	0
TOTAL, 1ST 30 INSTS.	1,379,811	182,063	169,863	169,529	23,323	697,420	29,346	67,118	40,149
31 UNIVERSITY OF PITTSBURGH	23,327	2,675	3,949	901	711	14,202	368	250	271
32 UNIV OF MD COLLEGE PARK	23,174	2,292	12,658	480	1,805	4,448	644	778	69
33 INDIANA UNIV	22,278	39	7,591	409	408	11,237	989	702	903
34 NEW MEXICO STATE UNIV	21,718	18,945	859	633	152	842	152	91	44
35 U TEX HLTH SCI CTR DALLAS	20,871	0	0	0	19	20,852	0	0	0
36 UNIV OF CAL IRVINE	20,211	679	4,796	0	162	13,516	0	1,076	2
37 UNIVERSITY OF NEW MEXICO	19,024	6,208	641	546	97	11,032	87	413	0
38 UNIV OF TEX CANCER CENTER	18,471	0	953	0	1,667	15,851	0	0	0
39 SUNY AT STONY BROOK	18,460	1,137	4,737	2,676	641	8,265	421	543	40
40 UNIVERSITY OF GEORGIA	17,953	159	750	1,202	722	13,654	242	1,214	0
TOTAL, 1ST 40 INSTS.	1,584,298	214,207	236,797	176,376	29,687	811,319	32,249	72,185	41,478
41 IOWA ST U OF SCI & TECH	16,919	3,270	725	332	532	9,368	140	1,714	738
42 UNIVERSITY OF KANSAS	16,676	1,816I	1,477I	393I	205I	8,047I	4,457I	291I	0I
43 VA POLYTECH INST & ST U	16,390	5,259	1,796	1,959	295	6,350	112	609	0
44 RUTGERS THE ST UNIV OF NJ	16,159	1,166	3,025	585	1,525	4,606	1,510	3,769	13
45 UNIVERSITY OF CINCINNATI	16,041	1,468	574	113	76	13,705	0	10	95
46 LOUISIANA STATE UNIV	15,868	1,023	1,736	4,921	99	7,913	128	48	0
47 SUNY AT BUFFALO	15,664	1,690	1,413	595	462	10,302	176	1,003	23
48 N C STATE UNIV AT RALEIGH	15,611	4,137	826	1,521	415	8,451	30	231	0
49 UTAH STATE UNIVERSITY	14,919	4,284	425	4,249	29	4,966	75	653	132
50 VIRGINIA COMMONWLTH UNIV	14,675	0	234	0	31	14,381	21	8	0
TOTAL, 1ST 50 INSTS.	1,743,010	238,320	219,028	191,000	33,356	899,408	38,998	80,521	42,479

SEE FOOTNOTES AT END OF TABLE.

TABLE B-22. -- FEDERALLY FINANCED R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIV OF RHODE ISLAND	13,847	1,555I	339I	10,379I	0	1,445I	0	119I	0
52 TEMPLE UNIVERSITY	13,686	0	1,492	9	66	11,303	115	633	68
53 UNIV OF MISSOURI COLUMBIA	13,603	695	484	413	58	10,608	135	1,196	14
54 UNIV OF MD BALT PROF SCH	13,322	0	0	0	0	13,253	0	69	0
55 UNIVERSITY OF KENTUCKY	13,093	2,348	306	458	203	9,499	0	279	0
56 WAYNE STATE UNIVERSITY	12,136	1,623	1,904	0	175	8,651	74	341	28
57 WASHINGTON STATE UNIV	11,855	1,626	1,166	238	144	8,217	8	456	0
58 UNIV OF VT & ST AGRIC COL	11,640	160	627	24	59	10,412	115	118	65
59 OKLAHOMA STATE UNIVERSITY	11,137	4,121I	298I	66I	95I	5,050I	17I	148I	712I
60 UNIV OF CAL SANTA BARBARA	11,079	735	3,339	2,173	481	1,246	610	1,740	754
TOTAL, 1ST 60 INSTS.	1,869,437	250,593	229,643	204,760	34,637	979,092	39,972	85,620	44,120
61 U TEX MED BRNCH GALVESTON	10,387	0	0	0	0	10,387	0	0	0
62 UNIV OF NEBRASKA-LINCOLN	10,380	594	2,602	1,716	44	4,311	130	983	0
63 UNIV OF ILL MED CTR CHGO	10,329	0	0	0	0	10,329	0	0	0
64 U TEX HLTH SCI CTR S ANTO	10,158	0	0	0	0	10,158	0	0	0
65 UNIV OF MASS AT AMHERST	9,871	1,124	3,442	815	504	2,829	575	582	0
66 WEST VIRGINIA UNIVERSITY	9,225	2,634	217	481	11	5,036	31	815	0
67 UNIVERSITY OF DELAWARE	9,180	2,554	1,246	1,789	300	1,913	115	190	1,183
68 U TENNESSEE KNOXVILLE	9,159E	2,687I	1,521I	645I	122I	2,770I	398I	1,026I	0
69 COL OF MED & DENT OF N J	9,095	0	0	0	0	9,095	0	0	0
70 UNIV OF CAL RIVERSIDE	9,862	0	1,545	389	81	5,352	204	243	1,048E
TOTAL, 1ST 70 INSTS.	1,965,093	260,196	240,236	210,595	35,699	1,041,172	41,425	89,449	46,351
71 UNIV OREGON HLTH SCI CTR	8,836	0	0	0	0	8,755	81	0	0
72 MISSISSIPPI STATE UNIV	8,924	2,506	24	58	0	5,002	0	881	353
73 U TEX HLTH SCI CTR HOUSTN	8,811	0	0	93	0	8,493	0	225	0
74 KANS ST U - AG & APP SCI	8,677	1,347	675	293	161	3,893	19	278	2,011
75 FLORIDA STATE UNIVERSITY	8,501	0	2,486	2,090	420	2,051	783	620	51
76 UNIV TENN CTR HEALTH SCI	8,182	0	0	0	0	8,182	0	0	0
77 UNIVERSITY OF OREGON MAIN	7,893	0	2,215	565	154	1,376	908	505	2,170
78 UNIV OF OKLAHOMA NORMAN	7,634	1,277	820	3,606	33	553	122	1,223	0
79 SUNY DOWNSTATE MED CTR	7,358	0	0	0	0	7,358	0	0	0
80 AUBURN UNIVERSITY	6,959	1,475	378	3	22	4,985	0	136	0
TOTAL, 1ST 80 INSTS.	2,046,[illegible]	268,791	246,814	217,303	36,499	1,091,820	43,338	93,287	50,936
81 INST OF AGRI UNIV OF TENN	6,878I	0	0	0	0	6,878I	0	0	0
82 MED UNIV OF SO CAROLINA	6,774	0	0	0	0	6,774	0	0	0
83 MONTANA STATE UNIVERSITY	6,504	1,420	950	368	30	3,055	0	661	0
84 UNIVERSITY OF IDAHO	6,432	429	252	708	0	4,575	0	438	0
85 TEXAS TECH UNIVERSITY	6,363	3,457	451	62	129	1,790	187	287	0
86 US NAVAL POSTGRAD SCHOOL	6,246	2,515	745	1,196	699	0	152	939	0
87 UNIVERSITY OF WYOMING	6,233	627	995	2,436	18	1,285	71	640	161
88 UNIV OF NEW HAMPSHIRE	6,139	651	1,916	1,615	42	1,842	57	147	119
89 U OF HOUSTON CENTRAL CAM	6,154	2,191	1,086	370	33	1,509	607	354	4
90 ARIZONA STATE UNIVERSITY	5,939	806	1,836	751	27	1,465	237	817	0
TOTAL, 1ST 90 INSTS.	2,110,460	278,887	255,045	224,629	37,467	1,120,993	44,649	97,570	51,220
91 CLEMSON UNIVERSITY	5,847	1,485	465	0	143	3,384	0	370	0
92 UNIV OF MAINE ORONO	5,825	490	435	1,473	64	2,733	37	593	0
93 UNIV OF CAL SANTA CRUZ	5,823	0	1,747	920	543	1,942	247	378	46
94 UNIV OF ILL CHICAGO CIR	5,722	1,523	1,499	171	420	808	143	1,106	52
95 U OF NEB MED CTR AT OMAHA	5,213	0	0	0	0	5,213	0	0	0
96 SUNY AT ALBANY	5,236	0	1,638	1,472	155	1,210	382	369	0
97 MEDICAL COL OF GEORGIA	5,123	0	0	0	0	5,123	0	0	0
98 N MEX INST MINING & TECH	5,011	3,307E	119	1,531	14	40	0	0	0
99 UNIV OF P R-MAYAGUEZ	4,889	77	10	224	0	4,578	0	0	0
100 NC AG & TECH STATE UNIV	4,888E	338I	235I	0	26I	2,423I	0	1,866I	0
TOTAL, 1ST 100 INSTS.	2,164,307	286,107	261,193	230,420	38,832	1,148,447	45,458	102,232	51,318
TOTAL, ALL OTHER INSTS.	183,733	22,336	28,160	19,377	3,888	53,199	6,748	10,204	5,818

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 3-23. -- R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	2,221,354	357,437	303,580	144,208	111,177	1,122,848	39,104	107,569	35,432
1 JOHNS HOPKINS UNIVERSITY	253,204	55,865	48,210	28,447	42,018	70,077	1,131	2,690	4,766
2 MASS INST OF TECHNOLOGY	163,566	69,576	46,362	8,912	9,007	20,651	2,572	4,008	2,478
3 STANFORD UNIVERSITY	113,120	33,327	17,345	2,313	7,113	46,776	2,208	4,038	0
4 CORNELL UNIVERSITY	107,611	14,274	17,249	3,363	1,543	62,421	2,280	5,393	88
5 COLUMBIA UNIV MAIN DIV	101,407	7,719	10,404	17,886	598	58,219	491	6,090	0
6 HARVARD UNIVERSITY	100,901E	2,812E	13,422E	5,54PE	1,820E	66,599E	1,785E	7,365E	1,550E
7 UNIV OF PENNSYLVANIA	94,198	4,441	9,130	665	3,465	58,766	1,142	13,868	2,721
8 UNIV OF SOUTHERN CAL	74,324	20,624	3,373	6,601	245	35,939	2,383	5,139	0
9 YALE UNIVERSITY	71,446	2,517	7,309	735	2,016	53,859	1,243	3,769	0
10 UNIVERSITY OF ROCHESTER	65,845	17,285	6,343	31	875	38,917	1,199	518	677
TOTAL, 1ST 10 INSTS.	1,145,602	228,440	179,147	74,499	68,700	512,224	16,434	53,878	12,280
11 WASHINGTON UNIVERSITY	57,379	2,902	2,359	693	4,050	47,803	738	834	0
12 UNIVERSITY OF CHICAGO	53,436	0	14,501E	2,159E	1,103E	37,570E	858E	2,245E	0
13 NEW YORK UNIVERSITY	56,739	50	2,601	295	5,000	42,881	897	2,940	2,071
14 CALIFORNIA INST OF TECH	43,259	9,135	17,886	7,266	2,142	6,206	0	624	0
15 YESHIVA UNIVERSITY	42,666	0	30	0	66	42,272	0	298	0
16 NORTHWESTERN UNIVERSITY	42,617	5,145	3,630	369	361	25,584	948	982	5,608
17 UNIVERSITY OF MIAMI	41,450	1,224	196	12,491	130	26,707	222	8	472
18 CASE WESTERN RESERVE UNIV	40,588	10,048	3,276	437	55	26,164	210	498	0
19 DUKE UNIVERSITY	37,066	1,491	2,799	1,000	408	31,395	602	1,381	0
20 ROCKEFELLER UNIVERSITY	38,089	0	3,010	0	1,156	30,163	3,760	0	0
TOTAL, 1ST 20 INSTS.	1,607,991	258,425	229,435	99,199	83,175	828,969	24,669	63,698	20,431
21 BAYLOR COL OF MEDICINE	37,908	0	0	0	0	37,908	0	0	0
22 CARNEGIE-MELLON UNIV	29,308	6,707	3,871	1,754	5,923	8,226	1,093	2,631	1,103
23 WOODS HOLE OCNGRPHIC INST	29,209	3,526	0	25,683	0	0	0	0	0
24 PRINCETON UNIVERSITY	27,821	6,963	7,842	2,921	1,902	3,609	1,266	3,318	0
25 CUNY MT SINAI SCH OF MED	25,718	0	0	0	22	26,696	0	0	0
26 BOSTON UNIVERSITY	24,393	314	1,580	171	97	20,250	166	812	1,003
27 VANDERBILT UNIVERSITY	20,570	516	1,305	82	104	17,245	600	643	70
28 UNIVERSITY OF DAYTON	19,678	11,908	4,499	144	2,178	351	4	104	490
29 GEORGE WASHINGTON UNIV	19,961	3,235	422	581	1,554	10,320	170	1,614	1,065
30 BROWN UNIVERSITY	17,950	3,800	3,400	2,100	1,900	5,700	500	550	0
TOTAL, 1ST 30 INSTS.	1,860,537	295,394	252,354	132,635	96,860	957,274	28,468	73,360	24,162
31 GEORGETOWN UNIVERSITY	17,532	0	965	0	0	10,615	0	19	5,903
32 SYRACUSE UNIVERSITY	16,517	4,373	2,021	274	1,125	2,670	325	5,267	462
33 EMORY UNIVERSITY	15,725	0	848	2	19	14,672	65	119	0
34 RENSSELAER POLYTECH INST	14,824	10,556	2,387	0	563	427	42	167	682E
35 UNIVERSITY OF DENVER	14,743	4,784	2,381	0	162	278	853	4,278	2,007
36 TULANE UNIVERSITY	12,426	643	152	7	182	10,895	206	171	170
37 TUFTS UNIVERSITY	11,783	615	664	0	44	10,068	217	175	0
38 HOWARD UNIVERSITY	11,658	1,095	1,537	0	52	7,390	29	1,546	9
39 ALBANY MEDICAL COLLEGE	11,420	0	0	0	0	11,420	0	0	0
40 MEDICAL COLLEGE OF WIS	10,655	0	0	0	0	10,655	0	0	0
TOTAL, 1ST 40 INSTS.	1,997,760	317,460	263,309	132,918	99,007	1,036,364	30,205	85,102	33,395
41 DARTMOUTH COLLEGE	9,578	1,124	755	302	56	7,002	238	101	0
42 BRANDEIS UNIVERSITY	9,566	0	1,607	0	231	5,284	283	2,151	0
43 THOMAS JEFFERSON UNIV	9,532E	0	0	0	0	9,532E	0	0	0
44 LEHIGH UNIVERSITY	9,413	4,488	2,160	461	697	196	12	691	708
45 UNIVERSITY OF NOTRE DAME	9,845	2,412	4,482	17	118	1,327	98	14	377
46 RUSH UNIVERSITY	8,815	0	0	0	0	8,572	243	0	0
47 ST JOHN'S UNIVERSITY (NY)	3,519	0	1,174	0	2,003	1,464	710	3,168	0
48 RICE UNIVERSITY	8,029	1,507	3,819	603	437	1,523	93	37	0
49 POLYTECHNIC INST OF N Y	6,814E	5,671E	9,8E	0	62E	32E	0	91E	0
50 ST LOUIS UNIVERSITY	6,695E	42	39	672	0	5,554	116	272	0
TOTAL, 1ST 50 INSTS.	2,083,566	332,704	278,313	134,973	102,611	1,076,850	31,998	91,637	34,480

SEE FOOTNOTES AT END OF TABLE.

TABLE B-23. -- R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 WAKE FOREST UNIVERSITY	5,972E	0	61	0	0	5,703E	0	153E	55E
52 NORTHEASTERN UNIVERSITY	5,669I	1,681I	1,982I	0	126I	571I	536I	547I	226I
53 BOSTON COLLEGE	5,430	0	1,383	1,264	1,863	313	164	443	0
54 DREXEL UNIVERSITY	5,367	2,561	1,909	0	379	372	81	55	0
55 NEW YORK MEDICAL COLLEGE	5,233E	0	0	0	0	5,233E	0	0	0
56 STEVENS INSTITUTE OF TECH	4,130	2,806	837	87	3	0	352	45	0
57 LOMA LINDA UNIVERSITY	4,091E	0	0	0	779E	2,895E	417E	0	0
58 HAHNEMANN MED COL & HOSP	4,070E	0	0	0	0	3,744E	326E	0	0
59 BRIGHAM YOUNG UNIVERSITY	4,002E	1,457E	932E	0	0	1,435E	11E	137E	0
60 WORCESTER POLY INSTITUTE	3,696	2,794	305	0	26	293	0	278	0
TOTAL, 1ST 60 INSTS.	2,131,226	344,013	285,722	136,324	103,787	1,097,409	33,885	93,325	34,761
61 INSTITUTE PAPER CHEMISTRY	3,666E	1,686E	760E	682E	69E	467E	0	0	0
62 CLARKSON COLLEGE OF TECH	3,624	1,950	1,449	0	210	9	0	6	0
63 LOYOLA UNIV - CHICAGO	3,532I	0	70I	0	0	3,048I	269I	145I	0
64 OREGON GRADUATE CENTER	3,210	317	1,732	911	0	250	0	0	0
65 CATHOLIC UNIV OF AMERICA	3,017	674	1,892	0	8	161	108	174	0
66 ILLINOIS INST OF TECH	3,010I	1,149I	431I	361I	649I	123I	297I	0	0
67 SOUTHERN METHODIST UNIV	2,743	756	90	674	241	127	116	591	148
68 THE MEDICAL COL OF PENNA	2,651	0	0	0	0	2,651	0	0	0
69 GALLAUDET COLLEGE	2,589E	0	738I	0	932I	0	0	919I	0
70 AMERICAN UNIVERSITY	2,496	0	611	0	5	65	57	1,718	0
TOTAL, 1ST 70 INSTS.	2,161,722	350,545	293,495	138,952	107,901	1,104,310	34,732	95,878	34,909
71 CREIGHTON UNIVERSITY	2,348I	0	0	0	0	1,437I	0	911I	0
72 NEW YORK INST TECHNOLOGY	2,301	215	49	0	1,264	752	21	0	0
73 WENTWORTH INST OF TECH	2,138	0	0	2,108	0	0	0	0	0
74 TEXAS CHRISTIAN UNIV	2,086	0	429	0	48	28	100	1,491	0
75 WESLEYAN UNIVERSITY	1,956E	0	760E	7F	35E	911E	126E	117E	0E
76 ATLANTA UNIVERSITY	1,797	0	772	0	214	376	0	235	0
77 ROCHESTER INST TECHNOLOGY	1,731	96	28	0	9	464	0	1,134	0
78 UNIVERSITY OF TULSA	1,540	961	126	9	1	0	4	439	0
79 WELLESLEY COLLEGE	1,472	0	21	0	87	60	0	1,304	0
80 THE WRIGHT INSTITUTE	1,461	0	0	0	0	0	1,461	0	0
TOTAL, 1ST 80 INSTS.	2,180,492	351,817	295,780	141,076	109,559	1,108,338	36,444	102,569	34,909
81 UNIVERSITY OF REDLANDS	1,446I	0	301	0	0	675I	0	741I	0
82 FAIRLEIGH DICKINSON UNIV	1,356	24	63	581	0	595	0	93	0
83 CLARK UNIVERSITY	1,343	0	232	35	28	145	218	690	0
84 FLORIDA INST OF TECH	1,269	81	23	239	0	788	1	0	137
85 UNIVERSITY OF SANTA CLARA	1,108I	622I	76I	240I	29I	13I	0	115I	16I
86 MARQUETTE UNIVERSITY	1,103	298	125	0	12	665	0	3	0
87 U HLTH SCI/CHCGO MED SCH	1,094I	0	0	0	0	1,094I	0	0	0
88 FORDHAM UNIVERSITY	1,092E	0	92I	90I	33I	98I	11	778I	0
89 NOVA UNIVERSITY	1,044I	0	0	920I	0	110I	14I	0	0
90 POMONA COLLEGE	969E	0	388I	0	79I	349I	79I	74I	0
TOTAL, 1ST 90 INSTS.	2,192,321	352,842	296,809	143,181	109,736	1,112,870	36,757	105,084	35,062
91 ALFRED UNIVERSITY	954E	914I	0	37I	0	3I	0	0	0
92 MANHATTAN COLLEGE	941	843	55	0	24	18	1	0	0
93 OCCIDENTAL COLLEGE	922	0	41	0	0	881	0	0	0
94 AMHERST COLLEGE	853	0	4[illegible]	67	0	288	0	56	0
95 INSTITUTE OF TEXTILE TECH	823I	539I	76I	90I	118I	0	0	0	0
96 UNIVERSITY OF THE PACIFIC	779I	0	5I	18I	0	578I	92I	94I	2[illegible]
97 HARVEY MUDD COLLEGE	748	354	196	0	149	25	0	3	21
98 NE OHIO UNIVS MED SCHOOL	748	0	0	0	0	748	0	0	0
99 EMMANUEL COLLEGE	731	0	696E	35	0	0	0	0	0
100 TEXAS COL OF OSTEO MED	723	0	75	0	0	645	0	0	0
TOTAL, 1ST 100 INSTS.	2,200,540	355,492	298,395	143,428	110,027	1,116,056	36,850	105,237	35,085
TOTAL, ALL OTHER INSTS.	20,814	1,945	5,185	780	1,150	6,792	2,254	2,351	347

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. -- FEDERALLY FINANCED R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	1,744,932	246,104	265,979	121,617	95,277	860,190	28,830	65,661	21,174
1 JOHNS HOPKINS UNIVERSITY	239,855	56,772	47,465	26,856	41,788	61,481	886	2,006	4,601
2 MASS INST OF TECHNOLOGY	138,400	57,399	42,074	8,593	7,200	16,170	2,449	2,902	1,613
3 STANFORD UNIVERSITY	102,645	29,473	16,723	1,435	6,406	43,328	1,510	3,770	0
4 COLUMBIA UNIV MAIN DIV	83,729	4,079	9,882	17,638	573	47,418	415	3,724	0
5 HARVARD UNIVERSITY	76,377	2,129	10,160	4,199	1,378	50,412	1,351	5,575	1,173
6 CORNELL UNIVERSITY	70,533	11,869	15,405	3,268	1,351	34,392	912	3,380	6
7 UNIV OF PENNSYLVANIA	70,553	3,382	8,108	417	2,389	44,947	1,058	7,638	2,554
8 YALE UNIVERSITY	63,572	2,420	6,927	718	1,867	48,367	911	2,362	0
9 UNIVERSITY OF CHICAGO	50,119	0	13,328	1,969	1,002	31,639	648	1,532	0
10 UNIV OF SOUTHERN CAL	50,001	16,074	2,676	4,301	204	21,642	1,938	3,166	0
TOTAL, 1ST 10 INSTS.	945,833	181,597	172,748	69,394	64,158	379,796	12,078	36,115	9,947
11 WASHINGTON UNIVERSITY	47,756	2,448	1,974	666	3,813	37,757	672	426	0
12 UNIVERSITY OF ROCHESTER	43,990	8,889	5,258	27	722	27,688	792	348	166
13 NEW YORK UNIVERSITY	43,705	50	2,360	294	4,778	32,756	556	1,778	1,133
14 CALIFORNIA INST OF TECH	38,330	7,738	17,011	6,341	1,524	5,317	0	399	0
15 DUKE UNIVERSITY	36,165	1,219	2,523	938	357	29,339	588	1,201	0
16 NORTHWESTERN UNIVERSITY	31,971	4,575	3,363	291	349	17,383	886	613	4,511
17 YESHIVA UNIVERSITY	31,540	0	27	0	59	31,214	0	240	0
18 BAYLOR COL OF MEDICINE	31,211	0	0	0	0	31,211	0	0	0
19 CASE WESTERN RESERVE UNIV	29,721	7,804	2,821	297	55	18,483	138	123	0
20 UNIVERSITY OF MIAMI	29,268	897	159	8,336	93	19,472	208	7	96
TOTAL, 1ST 20 INSTS.	1,309,390	215,217	208,244	86,584	75,908	650,416	15,918	41,250	15,853
21 WOODS HOLE OCEANOGRAPHIC INST	25,042	3,241	0	11,901	0	0	0	0	0
22 BOSTON UNIVERSITY	22,238	227	1,417	111	97	18,909	154	615	708
23 CUNY MT SINAI SCH OF MED	21,182	0	0	0	22	21,160	0	0	0
24 PRINCETON UNIVERSITY	20,895	5,411	6,803	2,020	1,375	2,431	1,084	1,771	0
25 CARNEGIE-MELLON UNIV	19,645	5,150	3,291	338	4,906	2,447	812	1,974	727
26 ROCKEFELLER UNIVERSITY	19,290	0	1,212	0	216	15,964	1,898	0	0
27 UNIVERSITY OF DAYTON	17,938	10,792	4,176	130	2,018	324	1	94	453
28 GEORGE WASHINGTON UNIV	16,780	3,087	421	570	1,191	9,004	170	1,393	954
29 VANDERBILT UNIVERSITY	16,498	290	1,058	75	31	14,259	421	364	0
30 BROWN UNIVERSITY	15,375	3,100	3,000	1,900	1,870	4,500	500	505	0
TOTAL, 1ST 30 INSTS.	1,504,323	246,515	229,622	104,329	87,624	739,414	20,958	47,966	18,695
31 EMORY UNIVERSITY	13,558	0	711	1	14	12,657	62	113	0
32 UNIVERSITY OF DENVER	10,784	4,668	2,024	0	137	236	725	3,598	0
33 TUFTS UNIVERSITY	10,059	506	658	0	31	8,430	201	133	0
34 GEORGETOWN UNIVERSITY	9,558	0	923	0	0	7,574	0	0	1,061
35 RENSSELAER POLYTECH INST	9,192	6,545	1,480	0	349	265	26	104	423
36 BRANDEIS UNIVERSITY	9,854	0	1,536	0	231	5,045	267	1,775	0
37 SYRACUSE UNIVERSITY	9,626	3,117	1,181	159	849	1,714	153	1,291	172E
38 DARTMOUTH COLLEGE	8,451	834	587	291	51	6,400	225	63	0
39 HOWARD UNIVERSITY	8,172	578	1,317	0	45	5,521	18	693	0
40 TULANE UNIVERSITY	7,990	413E	98E	5E	117E	7,006E	132E	110E	109E
TOTAL, 1ST 40 INSTS.	1,599,569	262,674	240,137	113,985	89,448	794,262	22,767	55,836	20,460
41 UNIVERSITY OF NOTRE DAME	7,816	2,067	4,286	12	112	1,047	94	14	184
42 THOMAS JEFFERSON UNIV	7,739E	0	0	0	0	7,739E	0	0	0
43 MEDICAL COLLEGE OF WIS	6,664	0	0	0	0	6,664	0	0	0
44 RUSH UNIVERSITY	6,195	0	0	0	0	5,963	232	0	0
45 RICE UNIVERSITY	6,184	1,079	3,040	222	363	1,389	71	20	0
46 ALBANY MEDICAL COLLEGE	5,351	0	0	0	0	5,351	0	0	0
47 ST LOUIS UNIVERSITY	5,139E	42	38	604	0	4,130	116	209	0
48 LEHIGH UNIVERSITY	5,131	2,747	1,084	297	368	41	0	393	201
49 WAKE FOREST UNIVERSITY	4,888E	0	16	0	0	4,719E	0	153E	0
50 BOSTON COLLEGE	4,818	0	1,210	1,173	1,743	195	153	344	0
TOTAL, 1ST 50 INSTS.	1,659,494	268,609	249,811	116,293	92,034	831,500	23,433	56,969	20,845

SEE FOOTNOTES AT END OF TABLE.

TABLE B-24. -- FEDERALLY FINANCED R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 NORTHEASTERN UNIVERSITY	4,742I	1,545I	1,563I	0	74I	456I	518I	417I	169I
52 POLYTECHNIC INST OF N Y	4,584E	3,790E	658E	0	48E	26E	0	62E	0
53 NEW YORK MEDICAL COLLEGE	4,363E	0	0	0	0	4,363E	0	0	0
54 DREXEL UNIVERSITY	3,960	1,867	1,350	0	303	304	66	70	0
55 HAHNEMANN MED COL & HOSP	3,158E	0	0	0	0	2,900E	252E	0	0
56 LOMA LINDA UNIVERSITY	3,111E	0	0	0	593E	2,202E	316E	0	0
57 LOYOLA UNIV - CHICAGO	2,834I	0	13I	0	0	2,459I	227I	135I	0
58 CATHOLIC UNIV OF AMERICA	2,677	606	1,660	0	7	133	97E	174E	0
59 CLARKSON COLLEGE OF TECH	2,639	1,521	937	0	18I	0	0	0	0
60 STEVENS INSTITUTE OF TECH	2,450	1,987	459	32	2	0	0	0	0
TOTAL, 1ST 60 INSTS.	1,694,022	279,905	256,451	116,325	93,242	844,349	24,909	57,827	21,014
61 THE MEDICAL COL OF PENNA	2,381	0	0	0	0	2,391	0	0	0
62 AMERICAN UNIVERSITY	2,374	0	611	0	5	84	54	1,660	0
63 WENTWORTH INST OF TECH	2,088	0	0	2,088	0	0	0	0	0
64 WORCESTER POLY INSTITUTE	2,035	1,257	256	0	16	268	0	238	0
65 SOUTHERN METHODIST UNIV	1,964	620	18	483	189	108	79	467	0
66 ILLINOIS INST OF TECH	1,962I	768I	334I	84I	55II	109I	116I	0	0
67 OREGON GRADUATE CENTER	1,870	185	1,010	531	0	144E	0	0	0
68 CREIGHTON UNIVERSITY	1,566I	0	0	0	0	912I	0	754	0
69 ATLANTA UNIVERSITY	1,543	0	742	0	197	365	0	244	0
70 BRIGHAM YOUNG UNIVERSITY	1,521E	292E	632E	0	0	557E	3E	37E	0
TOTAL, 1ST 70 INSTS.	1,713,331	283,027	260,054	119,511	94,200	849,137	25,161	61,227	21,014
71 TEXAS CHRISTIAN UNIV	1,479	0	306	0	45	26	88	1,014	0
72 THE WRIGHT INSTITUTE	1,392	0	0	0	0	0	1,392	0	0
73 WESLEYAN UNIVERSITY	1,236E	0	410E	2E	8E	709E	115E	52E	0E
74 UNIVERSITY OF SANTA CLARA	1,095I	602I	76I	240I	25I	13I	0	116I	16I
75 FORDHAM UNIVERSITY	1,034E	0	91I	88I	33I	97I	0I	775I	0
76 CLARK UNIVERSITY	1,048	0	158	24	27	138	146	555	0
77 POMONA COLLEGE	888E	0	313I	0	77I	343I	79I	74I	0
78 FAIRLEIGH DICKINSON UNIV	879	13	62	563	0	211	0	29	0
79 MANHATTAN COLLEGE	851	808	25	0	0	18	0	0	0
80 MARQUETTE UNIVERSITY	798	247	105	0	6	440	0	0	0
TOTAL, 1ST 80 INSTS.	1,724,131	284,697	261,600	120,428	94,421	851,132	26,981	63,842	21,030
81 AMHERST COLLEGE	783	0	386	67	0	280	0	56	0
82 U HLTH SCI/CHICGO MED SCH	767I	0	0	0	0	767I	0	0	0
83 EMMANUEL COLLEGE	729	0	693	35	0	0	0	0	0
84 UNIVERSITY OF TULSA	703	237	43	0	1	0	2	420	0
85 FLORIDA INST OF TECH	701	36	23	151	0	491	0	0	0
86 NOVA UNIVERSITY	557I	0	0	54SI	0	110I	14I	0	0
87 ST JOHN'S UNIVERSITY (NY)	536	0	46	0	0	590	0	0	0
88 WELLESLEY COLLEGE	522	0	16	0	18	51	0	537	0
89 TUSKEGEE INSTITUTE	615	0	0	0	0	615	0	0	0
90 UNIVERSITY OF THE PACIFIC	533I	0	31	0I	0	521I	4I	65I	0I
TOTAL, 1ST 90 INSTS.	1,730,954	284,970	262,810	121,226	94,440	854,557	27,001	64,920	21,030
91 SETON HALL UNIVERSITY	532I	0	192I	0	6I	0I	390I	0I	0
92 REED COLLEGE	573	0	44	0	89	415	6	6	0
93 NE OHIO UNIVS MED SCHOOL	566	0	0	0	0	566	0	0	0
94 TRINITY UNIVERSITY	526	196	177	0	0	63	72	18	0
95 ROCHESTER INST TECHNOLOGY	521	48	0	0	9	464	0	0	0
96 LONG ISLAND UNIVERSITY	447	0	0	54	0	337	0	36	30E
97 VILLANOVA UNIVERSITY	420	275	59	0	5	20	57	4	0
98 HARVEY MUDD COLLEGE	413	91	196	0	116	25	0	0	0
99 HAVERFORD COLLEGE	333	0	73	0	88	203	23	1	0
100 UNIV OF SAN FRANCISCO	372	0	310	0	0	62	0	0	0
TOTAL, 1ST 100 INSTS.	1,735,764	285,570	263,861	121,270	94,757	856,712	27,549	64,985	21,060
TOTAL, ALL OTHER INSTS.	9,058	534	2,118	347	520	3,478	1,281	676	114

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 3-25. -- R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	862,600	767,799	601,062	498,473	594,547	526,366	407,497	336,725
1 MASS INST OF TECHNOLOGY	69,576	59,143	43,172	36,936	57,399	49,056	35,532	29,915
2 JOHNS HOPKINS UNIVERSITY	55,865	54,094E	1,762	1,394	54,772	52,888E	1,507	1,260
3 GEORGIA INSTITUTE OF TECH	39,112	29,270	21,554	18,904	22,663	17,269	12,039	10,384
4 STANFORD UNIVERSITY	33,327	25,196	21,785E	16,971	29,473	22,201	19,724	15,074
5 PENNSYLVANIA STATE UNIV	25,411	22,901	25,400	9,344	18,892	17,563	20,376	5,492
6 NEW MEXICO STATE UNIV	21,510	14,876	7,729I	6,392	19,945	13,193	7,126I	5,894
7 UNIV OF SOUTHERN CAL	20,624	18,269	14,146	7,325	16,074	14,690	11,796	6,867
8 UNIV OF CAL BERKELEY	20,498	16,448	13,735	13,430	15,975	12,385	10,522	10,806
9 UNIV OF ILL URBANA	20,385	18,980	17,181	14,184	14,696	14,433	13,354	11,235
10 TEXAS A & M UNIVERSITY	19,844	18,988	17,605	11,866	9,698	8,249	7,727	5,693
TOTAL, 1ST 10 INSTS.	326,112	278,165	184,069	136,746	257,587	221,927	138,453	102,620
11 PURDUE UNIVERSITY	19,132	17,331	14,493	11,309	14,096	12,434	11,455	8,7[illegible]3
12 UNIVERSITY OF ROCHESTER	17,285	16,764	14,973	14,562	9,889	8,168	7,752	6,[illegible]79
13 UNIVERSITY OF FLORIDA	15,873E	13,686	10,394	4,841	5,296E	5,842	4,474	2,981
14 UNIVERSITY OF MICHIGAN	15,209	19,835	14,545	15,812	9,630	11,030	9,578	10,665
15 CORNELL UNIVERSITY	14,274	13,206	11,046	8,309	11,869	11,459	9,562	6,855
16 UNIVERSITY OF DAYTON	11,908	9,564	7,373	5,873	10,792	8,338	6,457	5,195
17 OHIO STATE UNIVERSITY	11,569	10,926	9,624	8,877	6,859	6,772	6,353	5,[illegible]97
18 UNIV OF WIS-MADISON	11,264	9,919	8,398	6,814	6,515	5,668	4,514	3,142
19 COLORADO STATE UNIVERSITY	10,765	8,604	8,169	6,449	7,952	6,161	6,752	4,984
20 RENSSELAER POLYTECH INST	10,556	7,849	5,297	4,511	6,545	5,521	3,383	3,370
TOTAL, 1ST 20 INSTS.	463,947	405,849	288,381	229,103	346,029	303,320	209,353	159,407
21 UNIV OF TEXAS AT AUSTIN	10,362	10,517	8,458	7,311	5,121	5,423	4,338	3,790
22 CASE WESTERN RESERVE UNIV	10,049	8,676	7,884	7,281	7,804	6,939	6,276	5,923
23 VA POLYTECH INST & ST U	9,374	7,243	5,366E	4,673	5,259	4,210	2,934E	2,720
24 UNIVERSITY OF MINNESOTA	9,285	8,726	7,641	5,970	5,339	5,172	4,549	3,831
25 CALIFORNIA INST OF TECH	9,135	8,339	6,527	7,849	7,739	6,872	5,492	6,279
26 IOWA ST U OF SCI & TECH	9,101	8,330	7,194	5,956	3,270	2,886	2,330	2,231
27 N C STATE UNIV AT RALEIGH	8,616	8,416	4,198	4,257	4,137	4,011	1,931	1,961
28 UNIVERSITY OF UTAH	8,311	7,123	7,117	5,685	6,589	5,702	4,352	4,344
29 COLUMBIA UNIV MAIN DIV	7,719	5,375	5,819	6,294	4,079	2,929	2,987	2,498
30 UNIV OF CAL LOS ANGELES	7,528	6,168	6,289	6,374	6,810	5,505	5,746	5,750
TOTAL, 1ST 30 INSTS.	553,426	484,762	354,874	285,753	402,174	352,969	250,428	198,334
31 PRINCETON UNIVERSITY	6,963	6,358	6,524	7,332	5,411	4,968	4,378	4,613
32 UNIVERSITY OF NEW MEXICO	6,912	6,575	6,769	4,708	6,208	5,478	5,780	3,799
33 CARNEGIE-MELLON UNIV	6,707	6,409	8,593	6,636	5,150	4,880	5,793	4,249
34 UTAH STATE UNIVERSITY	6,293	5,513	4,888	4,335	4,284	4,068	3,172	3,371
35 UNIVERSITY OF ARIZONA	6,208	5,261	3,204	2,302	3,411	3,198	1,712	1,370
36 OKLAHOMA STATE UNIVERSITY	5,891I	4,120I	4,254I	4,225	4,121I	1,955I	2,511I	2,724
37 TEXAS TECH UNIVERSITY	5,685	5,513	3,555	2,722	3,457	3,302	2,004	1,805
38 UNIVERSITY OF KENTUCKY	5,683	5,056	4,570I	3,174I	2,349	2,205	3,333I	1,477I
39 POLYTECHNIC INST OF N Y	5,671E	5,310	4,690	3,723	3,790E	3,549	3,245	2,519
40 UNIVERSITY OF VIRGINIA	5,629	4,673	4,549	4,344E	5,085	4,148	3,999	3,434E
TOTAL, 1ST 40 INSTS.	615,068	539,550	406,470	329,254	445,439	390,720	287,255	227,695
41 U OF HOUSTON CENTRAL CAM	5,587	5,015	1,864I	1,641	2,191	2,118	1,398I	1,228
42 UNIVERSITY OF WASHINGTON	5,445	5,430	4,885	3,819	4,258	4,274	3,935	3,077
43 NORTHWESTERN UNIVERSITY	5,145	5,170	4,464	3,330	4,575	4,444	3,847	2,956
44 N MEX INST MINING & TECH	5,076	3,161	1,435	1,387	3,307E	2,289E	1,212	1,189
45 WEST VIRGINIA UNIVERSITY	4,877	4,618	3,232	3,291	2,634	2,598	1,970	2,100
46 MICHIGAN TECH UNIVERSITY	4,850	4,586	4,133	2,970	2,015	3,070E	1,472E	1,203
47 UNIVERSITY OF DENVER	4,784	5,049	2,892	2,454	4,066	4,347	2,436	1,893
48 CLEMSON UNIVERSITY	4,631	4,356	3,380	2,363	1,485	2,394	739	741
49 UNIVERSITY OF DELAWARE	4,610	3,302	1,896	1,823	2,554	2,152	1,357	1,323
50 UNIV OF MISSOURI ROLLA	4,517	3,606	3,544	3,660	1,984	1,578	1,498	1,823
TOTAL, 1ST 50 INSTS.	664,590	583,803	438,195	355,992	474,508	417,984	307,310	245,222

SEE FOOTNOTES AT END OF TABLE.

TABLE B-25. -- R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 LEHIGH UNIVERSITY	4,488	4,568	4,037	3,528	2,747	2,477	2,316	1,923
52 UNIV OF PENNSYLVANIA	4,441	4,579	4,056	4,541	3,382	3,725	3,305	3,445
53 SYRACUSE UNIVERSITY	4,373	4,063	3,822	2,717	3,117	2,688	2,570	2,446
54 LOUISIANA STATE UNIV	4,365	4,130	2,653	1,631	1,023	1,200	734	452
55 UNIV OF CENTRAL FLORIDA	4,274	676	-	1,448	1,986	301	-	152
56 U TENNESSEE KNOXVILLE	4,266I	4,266	3,670	2,533	2,687I	2,687	2,236	1,769
57 UNIVERSITY OF CONNECTICUT	4,187	4,069	3,155	2,863	2,503	2,381	1,836	1,080
58 UNIV OF ARK FAYETTEVILLE	4,108E	6,712E	1,392	559	354	1,162	552	291
59 UNIV OF MD COLLEGE PARK	4,083	3,519	3,138	4,503	2,292	2,137	2,147	2,930
60 UNIV OF CAL DAVIS	3,962	3,136	4,560	3,960	2,022	1,613	1,557	1,523
TOTAL, 1ST 60 INSTS.	707,137	623,521	468,678	386,275	496,621	438,355	329,543	261,213
61 UNIVERSITY OF PITTSBURGH	3,807	2,794	2,792	2,025	2,675	1,932	1,737	1,404
62 BROWN UNIVERSITY	3,800	3,497	3,282	2,482	3,100	3,009	2,964	2,203
63 WASHINGTON STATE UNIV	3,560	3,486	3,468	3,904	1,626	1,938	1,437	1,486
64 WOODS HOLE OCNGRPHIC INST	3,526	3,257	2,671	1,687	3,241	3,002	2,247	1,643
65 MISSISSIPPI STATE UNIV	3,272	2,463	1,995	1,744	2,506	1,632	839	985
66 GEORGE WASHINGTON UNIV	3,235	3,166	3,667	3,050	3,087	2,952	3,587	3,019
67 KANS ST U - AG & APP SCI	3,193	2,604	2,353	1,792	1,347	1,087	948	640
68 WASHINGTON UNIVERSITY	2,902	5,257	5,938	5,153	2,445	4,517	5,353	4,859
69 OREGON STATE UNIVERSITY	2,881	3,128	2,109	2,341	1,633	1,555	1,197	1,189
70 AUBURN UNIVERSITY	2,838	2,450	2,388	1,872	1,475	1,115	1,568	1,397
TOTAL, 1ST 70 INSTS.	740,151	655,623	499,341	410,325	519,759	461,094	345,570	280,039
71 UNIV OF RHODE ISLAND	2,820I	2,611I	1,396I	1,200	1,565I	1,449I	1,215I	1,075
72 HARVARD UNIVERSITY	2,812E	2,581E	1,498E	1,470	2,129	1,955	1,396	1,370
73 STEVENS INSTITUTE OF TECH	2,806	2,313	2,607	2,500	1,967	1,633	1,347	1,842
74 WORCESTER POLY INSTITUTE	2,794	2,509	2,082	2,124	1,257	422	293	341
75 WAYNE STATE UNIVERSITY	2,724	2,693	3,236	1,665	1,023	1,120	1,328	1,022
76 SUNY AT BUFFALO	2,690	3,019	2,934	1,861	1,690	2,017	1,905	1,507
77 UNIV OF OKLAHOMA NORMAN	2,640	1,834	1,522	1,002	1,277	1,100	932	852
78 DREXEL UNIVERSITY	2,541	2,649	2,951	1,957	1,867	1,802	2,041	1,405
79 YALE UNIVERSITY	2,517	2,510	2,016	1,756	2,420	1,997	1,748	1,548
80 US NAVAL POSTGRAD SCHOOL	2,515	2,180	1,164	1,438	2,515	2,180	1,164	1,439
TOTAL, 1ST 80 INSTS.	767,010	680,522	520,747	427,298	537,469	476,769	360,909	292,438
81 UNIV OF HAWAII-MANOA	2,491	2,010	1,547	1,880	1,543	1,404	990	1,392
82 UNIVERSITY OF CINCINNATI	2,483	2,360	2,195	2,108	1,468	1,412	1,440	1,357
83 COLORADO SCHOOL OF MINES	2,434	1,845I	1,639	1,925	2,112	1,219I	1,086E	1,343
84 UNIVERSITY OF NOTRE DAME	2,412	1,544	1,349	1,252	2,067	1,295	1,156	1,075
85 MICHIGAN STATE UNIVERSITY	2,363	2,247	2,152	1,882	1,033	742	889	745
86 RUTGERS THE ST UNIV OF NJ	2,317	1,877	1,695	1,197	1,165	1,050	957	639
87 UNIVERSITY OF COLORADO	2,273	1,849	1,779	1,832	1,632	1,387	1,323	1,347
88 UNIV OF NEBRASKA-LINCOLN	2,258	1,582	1,733	1,804	594	360	432	419
89 MONTANA STATE UNIVERSITY	2,107	1,589	1,787	1,574	1,420	992	987	945
90 UNIVERSITY OF KANSAS	2,088I	1,971	1,517I	1,840	1,816I	1,042I	928I	1,360
TOTAL, 1ST 90 INSTS.	790,236	699,232	538,140	444,592	552,320	487,672	371,117	303,060
91 UNIV OF CAL SAN DIEGO	2,038	1,453	1,931	2,008	1,953	1,336	1,573	1,937
92 CLARKSON COLLEGE OF TECH	1,950	1,791	1,135	1,030	1,521	1,292	750	722
93 UNIV OF ILL CHICAGO CIR	1,927	2,144	1,654E	1,716	1,523	1,453	1,311	1,183
94 UNIVERSITY OF IOWA	1,925	2,117	1,637	1,663	1,609	1,191	774	772
95 UNIV OF MASS AT AMHERST	1,901	2,256	1,818	1,606	1,124	1,245	1,124	1,106
96 UNIV OF NEVADA - RENO	1,744	1,160	901	808	801	924	347	308
97 INSTITUTE PAPER CHEMISTRY	1,686E	1,600	1,459	1,270	0	0	0	11
98 NORTHEASTERN UNIVERSITY	1,681I	1,486	1,379	1,344	1,545I	1,361	1,186	1,176
99 UNIV OF MISSOURI COLUMBIA	1,649	1,976	2,104	2,186	695	1,028	1,346	954
100 UNIVERSITY OF N DAKOTA	1,624I	1,505I	1,340	1,186	1,522I	1,409I	1,255	1,156
TOTAL, 1ST 100 INSTS.	808,361	716,720	553,498	459,407	564,612	498,511	381,033	312,385
TOTAL, ALL OTHER INSTS.	54,239	51,079	47,564	39,066	29,935	27,855	26,404	24,340

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-26. -- R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL				ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
	1980	1979	1978	1977				
TOTAL, ALL INSTITUTIONS	679,658	603,290	496,399	428,406	52,009	245,610	329,151	52,888
1 JOHNS HOPKINS UNIVERSITY	48,210	45,753E	2,961	2,766	41	4,652	27,939	15,578
2 MASS INST OF TECHNOLOGY	46,362	38,500	37,311	28,020	2,963	6,764	36,535	0
3 UNIV OF CAL SAN DIEGO	20,114	17,075	9,458	9,137	4,336	4,471	9,984	1,323
4 UNIV OF TEXAS AT AUSTIN	18,932	16,790	12,125	8,981	5,708	3,970	9,254	0
5 CALIFORNIA INST OF TECH	17,886	15,222	10,871	13,736	2,173	6,328	9,385	0
6 STANFORD UNIVERSITY	17,345	18,421	15,620E	12,119	0	4,788	12,557	0
7 CORNELL UNIVERSITY	17,249	20,660	14,649	12,134	1,544	3,808	10,298	1,599
8 UNIV OF MD COLLEGE PARK	16,888	14,341	14,120	7,714	0	2,766	10,329	3,793
9 UNIV OF CAL BERKELEY	15,914	11,800	10,864	12,260	1,901	6,022	2,332	5,159
10 UNIV OF WIS-MADISON	15,802	13,263	11,474	10,845	801	6,643	6,390	2,268
TOTAL, 1ST 10 INSTS.	234,702	211,825	139,453	117,712	19,467	50,212	135,303	29,720
11 UNIVERSITY OF ARIZONA	15,505	13,393	11,793	10,299	4,177	1,380	7,200	2,748
12 UNIVERSITY OF CHICAGO	14,501E	12,832E	11,918E	10,521	316E	3,958E	9,430E	827E
13 HARVARD UNIVERSITY	13,422E	13,129E	11,306E	8,947	1,591E	4,797E	5,303E	1,731E
14 UNIVERSITY OF COLORADO	12,874	10,253	7,958	7,838	5,693	3,332	3,848	1
15 UNIV OF CAL LOS ANGELES	11,063	9,774	8,954	7,502	384	4,159	6,316	204
16 UNIV OF ILL URBANA	10,800	9,498	7,959	6,343	675	4,261	5,864	0
17 COLUMBIA UNIV MAIN DIV	10,404	10,568	10,129	4,346	226	4,437	1,718	4,023
18 UNIV OF PENNSYLVANIA	9,130	7,669	5,854	6,254	68	3,688	5,374	0
19 INDIANA UNIV	8,567	7,013	6,460	4,653	108	3,147	5,312	0
20 PRINCETON UNIVERSITY	7,842	7,362	6,793	6,455	1,577	2,065	4,200	0
TOTAL, 1ST 20 INSTS.	348,810	313,316	228,577	190,870	34,282	85,436	189,935	39,256
21 YALE UNIVERSITY	7,309	6,510	5,660	5,027	455	2,023	4,831	0
22 UNIV OF HAWAII-MANOA	7,100	5,564	5,538	3,536	5,479	622	999	0
23 UNIVERSITY OF IOWA	7,001	4,371	2,986	3,333	488	901	5,612	0
24 UNIVERSITY OF MINNESOTA	6,554	5,149	5,044	5,444	377	2,662	3,535	0
25 UNIVERSITY OF MICHIGAN	6,534	4,940	4,034	3,378	494	2,064	3,976	0
26 PURDUE UNIVERSITY	6,375	5,695	4,836	4,417	0	3,596	2,779	0
27 UNIVERSITY OF ROCHESTER	6,343	6,628	6,001	5,545	0	2,089	4,254	0
28 SUNY AT STONY BROOK	6,251	5,685	4,583	3,338	380	1,966	3,777	128
29 GEORGIA INSTITUTE OF TECH	5,678	5,358	4,390	4,423	0	3,655	2,023	0
30 FLORIDA STATE UNIVERSITY	5,490	4,987	3,354I	3,308	0	2,791	2,599	0
TOTAL, 1ST 30 INSTS.	413,445	368,203	275,003	232,619	41,955	107,785	224,323	39,382
31 UNIVERSITY OF WASHINGTON	5,430	4,527	4,065	3,949	255	1,326	3,349	0
32 TEXAS A & M UNIVERSITY	5,427	4,378	3,811	4,746	0	4,097	1,330	0
33 UNIV OF CAL IRVINE	4,908	3,756	3,458	3,253	0	1,398	3,387	123
34 OHIO STATE UNIVERSITY	4,745	3,843	3,165	3,166	67	2,654	2,024	0
35 UNIVERSITY OF DAYTON	4,499	5,148	3,266	2,602	0	59	4,440	0
36 UNIVERSITY OF NOTRE DAME	4,482	3,596	3,297	3,431	0	3,457	1,025	0
37 UNIVERSITY OF PITTSBURGH	4,405	4,351	4,921	3,859	11	1,641	2,753	0
38 UNIV OF MASS AT AMHERST	4,328	5,155	4,090	3,600	1,066	1,889	1,056	307
39 UNIV OF ARK FAYETTEVILLE	4,167E	1,392E	1,860	347	0	1,674E	429E	2,064E
40 PENNSYLVANIA STATE UNIV	3,991	3,043	2,757	2,153	107	2,973	594	317
TOTAL, 1ST 40 INSTS.	459,827	407,392	309,701	263,725	43,461	28,953	245,220	42,193
41 RUTGERS THE ST UNIV OF NJ	3,961	3,599	3,270	2,918	0	1,406	2,555	0
42 MICHIGAN STATE UNIVERSITY	3,913	7,307	5,036	6,104	73	1,638	2,161	41
43 CARNEGIE-MELLON UNIV	3,871	3,949	8,497	6,299	0	2,075	1,796	0
44 UNIVERSITY OF UTAH	3,858	3,461	3,700	8,083	0	2,811	1,047	0
45 RICE UNIVERSITY	3,829	3,691I	3,279	2,819	1,599	1,310	920	0
46 UNIV OF CAL SANTA BARBARA	3,695	2,951	2,400	2,081	0	1,434	1,713	548
47 UNIV OF TEXAS AT DALLAS	3,651	3,863	2,833	-	0	235	3,122	294
48 NORTHWESTERN UNIVERSITY	3,630	4,369	4,050	3,467	0	2,367	1,253	0
49 LOUISIANA STATE UNIV	3,591	2,735	2,937	2,155	0	1,561	1,777	253
50 UNIVERSITY OF FLORIDA	3,591E	3,096	1,983	1,186	0	2,283E	1,306E	2E
TOTAL, 1ST 50 INSTS.	497,417	446,413	347,686	298,837	45,133	146,073	262,380	43,331

SEE FOOTNOTES AT END OF TABLE.

TABLE B-26. -- R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL				ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
	1980	1979	1978	1977				
51 BROWN UNIVERSITY	3,400	2,527	2,316	2,183	0	1,200	1,730	500
52 UNIV OF CAL SANTA CRUZ	3,386	2,825	3,040	2,620	1,986	900	500	0
53 UNIV OF SOUTHERN CAL	3,373	3,081	2,383	1,312	36	2,313	1,024	0
54 UNIV OF NEBRASKA-LINCOLN	3,334	2,948	1,805	846	0	2,289	1,045	0
55 CASE WESTERN RESERVE UNIV	3,276	2,764	2,547	2,518	132	1,938	1,206	0
56 ROCKEFELLER UNIVERSITY	3,010	2,719	2,417	1,741	0	1,170	1,340	0
57 UNIVERSITY OF VIRGINIA	2,935	2,372	1,818	2,514E	145	1,203	1,587	0
58 DUKE UNIVERSITY	2,799	2,148	1,988	1,747	0	878	1,921	0
59 UNIVERSITY OF CONNECTICUT	2,765	2,469	1,776	2,679	0	1,300	1,465	0
60 VA POLYTECH INST & ST U	2,604	2,082	1,998E	1,739	0	1,612	992	0
TOTAL, 1ST 60 INSTS.	528,299	472,348	369,774	318,736	47,432	160,876	276,160	43,831
61 NEW YORK UNIVERSITY	2,601	2,244	2,180	1,907	0	943	1,658	0
62 UNIV OF CAL DAVIS	2,573	1,603	1,424	1,394	0	1,290	1,283	0
63 WAYNE STATE UNIVERSITY	2,550	2,390	3,186	1,641	0	2,163	387	0
64 UNIVERSITY OF OREGON MAIN	2,484	2,250	1,682	1,918	0	1,119	1,121	244
65 RENSSELAER POLYTECH INST	2,387	1,246	1,150	1,055	0	1,551	557	279
66 COLORADO STATE UNIVERSITY	2,386	2,188	1,767	1,555	0	1,973	413	0
67 UNIVERSITY OF DENVER	2,381	2,008	1,902	1,826	0	1,007	1,374	0
68 UNIV OF NC AT CHAPEL HILL	2,376	2,231	1,988	2,177	0	1,789	587	0
69 WASHINGTON UNIVERSITY	2,359	2,32C	1,820	1,409	0	957	1,402	0
70 LEHIGH UNIVERSITY	2,160	1,939	1,711	1,419	0	245	161	1,754
TOTAL, 1ST 70 INSTS.	552,596	492,767	388,584	335,037	47,432	173,913	285,103	46,108
71 UNIV OF NEW HAMPSHIRE	2,158	1,977	2,281	1,534	1,153	221	769	15
72 U OF HOUSTON CENTRAL CAM	2,106	2,633	2,928I	2,565	0	1,371	735	0
73 SYRACUSE UNIVERSITY	2,021	1,908	2,872	892	0	764	1,257	0
74 UNIV OF ILL CHICAGO CIR	1,993	1,719	744E	864	0	764	1,229	0
75 SUNY AT BUFFALO	1,986	1,372	1,167	1,062	0	1,665	321	0
76 NORTHEASTERN UNIVERSITY	1,982I	1,765	1,470	1,312	0	607I	1,375I	0
77 ARIZONA STATE UNIVERSITY	1,973	1,683	1,240	1,125	0	1,449	390	134
78 SUNY AT ALBANY	1,947E	1,564E	1,285E	1,145	625E	739E	580E	0
79 DREXEL UNIVERSITY	1,909	878	1,140	872	0	731	1,178	0
80 CATHOLIC UNIV OF AMERICA	1,892	1,150	758	715	0	576	1,316	0
TOTAL, 1ST 80 INSTS.	572,523	509,416	404,469	346,723	49,213	182,800	294,253	46,257
81 UNIV OF CAL SAN FRANCISCO	1,799	1,235	1,110	850	235	1,564	0	0
82 UNIVERSITY OF GEORGIA	1,743	1,573	1,722	1,649	0	1,202	541	0
83 OREGON GRAUUATE CENTER	1,732	1,671	1,835	-	0	734	998	0
84 CUNY CITY CULLEGE	1,702	945	-	1,040	0	493	1,209	0
85 UNIV OF OKLAHOMA NORMAN	1,694	1,077	772	596	0	1,275	419	0
86 TEMPLE UNIVERSITY	1,672E	1,562E	1,429	1,562	0	360	435E	877E
87 UNIV OF TEX CANCER CENTER	1,672	1,588	1,246	1,203	0	0	1,672	0
88 UNIV OF CAL RIVERSIDE	1,647	1,494	1,262	1,186	0	637	1,010	0
89 U TENNESSEE KNOXVILLE	1,639I	1,639	1,410	1,283	0	929I	710I	0
90 UNIVERSITY OF DELAWARE	1,622	1,402	1,069	1,028	0	1,158	464	0
TOTAL, 1ST 90 INSTS.	589,445	523,602	416,324	357,120	49,448	191,152	301,711	47,134
91 BRANDEIS UNIVERSITY	1,607	1,436	1,138	1,201	0	832	775	0
92 UNIVERSITY OF KANSAS	1,602I	1,155I	1,028I	1,330	0	1,329I	273I	0
93 BOSTON UNIVERSITY	1,580	1,248	1,116	1,184	357	711	512	0
94 HOWARD UNIVERSITY	1,537	773	710	159	0	1,287	2	248
95 IOWA ST U OF SCI & TECH	1,508	1,548	1,712	3,339	0	1,159	349	0
96 UNIV OF MISSOURI KULLA	1,506	1,532	1,365	1,149	0	300	1,198	9
97 WASHINGTON STATE UNIV	1,490	1,923	1,123	884	0	1,043	442E	5E
98 CLARKSON CULLEGE OF TECH	1,449	1,218	963	711	0	1,157	292	0
99 BOSTON COLLEGE	1,383	1,062	756	707	0	624	759	0
100 MONTANA STATE UNIVERSITY	1,364	1,512	1,328	1,192	0	646	718	0
TOTAL, 1ST 100 INSTS.	604,471	537,009	427,563	368,976	49,805	200,240	307,331	47,395
TOTAL, ALL OTHER INSTS.	75,187	66,281	68,836	59,430	2,204	45,370	22,120	5,493

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-27. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL				ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
	1980	1979	1978	1977				
TOTAL, ALL INSTITUTIONS	555,332	491,140	392,346	342,769	37,697	189,349	286,957	41,419
1 JOHNS HOPKINS UNIVERSITY	47,465	45,149E	2,852	2,673	41	4,444	27,402	15,578
2 MASS INST OF TECHNOLOGY	42,074	35,365	33,577	24,335	223	6,311	35,540	0
3 UNIV OF CAL SAN DIEGO	19,473	16,698	9,020	9,626	4,264	4,087	9,937	1,185E
4 CALIFORNIA INST OF TECH	17,011	14,117	10,362	12,312	2,170	5,630	9,211	0
5 STANFORD UNIVERSITY	16,723	17,268	14,621	12,018	0	4,609	12,114	0
6 CORNELL UNIVERSITY	15,405	19,263	13,511	11,115	1,156	3,404	9,326	1,519
7 UNIV OF CAL BERKELEY	14,627	11,012	10,015	11,275	1,562	5,601	2,732	4,732
8 UNIVERSITY OF CHICAGO	13,328	11,354	10,618	9,694	291	3,558	8,719	760
9 UNIV OF TEXAS AT AUSTIN	13,118	11,772	8,036	9,362	3,090	2,564	7,464	0
10 UNIV OF MD COLLEGE PARK	12,659	12,091	11,822	6,452	0	2,292	9,221	2,145
TOTAL, 1ST 10 INSTS.	211,882	194,089	124,434	103,842	12,797	42,500	130,666	25,919
11 UNIV OF WIS-MADISON	10,963	8,938	7,772	7,175	513	3,779	4,985	1,686
12 UNIV OF CAL LOS ANGELES	10,883	9,285	8,536	7,202	374	4,017	6,291	201
13 UNIVERSITY OF COLORADO	10,742	7,681	6,715	6,779	4,936	2,805	3,230	1
14 HARVARD UNIVERSITY	10,160	9,935	9,901	7,835	1,204	3,631	4,314	1,311
15 UNIVERSITY OF ARIZONA	10,111	9,151	7,249	7,380	2,254	953	5,045	1,859
16 COLUMBIA UNIV MAIN DIV	9,882	10,127	9,609	4,034	197	4,054	1,608	4,023
17 UNIV OF ILL URBANA	8,877	7,102	5,996	5,468	471	3,424	4,982	0
18 UNIV OF PENNSYLVANIA	8,108	5,698	5,012	5,325	54	3,143	4,911	0
19 INDIANA UNIV	7,591	6,390	5,850	4,427	86	2,635	4,870	0
20 YALE UNIVERSITY	6,927	5,922	5,509	4,913	400	1,886	4,641	0
TOTAL, 1ST 20 INSTS.	336,126	279,118	196,583	164,380	23,286	72,627	175,213	35,000
21 PRINCETON UNIVERSITY	6,803	6,026	5,859	5,579	1,354	1,646	3,803	0
22 UNIVERSITY OF IOWA	6,192	3,964	2,546	2,969	431	807	4,954	0
23 UNIVERSITY OF MICHIGAN	5,832	4,267	3,659	2,771	458	1,775	3,599	0
24 PURDUE UNIVERSITY	5,817	5,216	4,347	3,950	0	3,151	2,666	0
25 UNIV OF HAWAII-MANOA	5,655	4,377	4,385	2,559	4,095	571	989	0
26 UNIVERSITY OF MINNESOTA	5,337	4,164	4,124	4,567	335	2,143	2,859	0
27 UNIVERSITY OF ROCHESTER	5,258	5,564	5,015	4,542	0	1,667	3,591	0
28 UNIVERSITY OF WASHINGTON	5,161	4,356	3,953	3,456	247	1,117	3,797	0
29 UNIV OF CAL IRVINE	4,796	3,659	3,358	3,122	0	1,344	3,380	72
30 SUNY AT STONY BROOK	4,737	4,413	3,099	3,083	380	1,632	2,597	128
TOTAL, 1ST 30 INSTS.	361,714	320,124	236,928	200,978	30,576	88,480	207,458	35,200
31 UNIVERSITY OF NOTRE DAME	4,286	3,426	3,162	3,288	0	3,328	958	0
32 UNIVERSITY OF DAYTON	4,176	4,488	2,868	2,308	0	55	4,121	0
33 TEXAS A & M UNIVERSITY	3,956	2,929	2,667	2,945	0	2,945	1,011	0
34 UNIVERSITY OF PITTSBURGH	3,949	3,857	3,829	3,461	8	1,366	2,575	0
35 OHIO STATE UNIVERSITY	3,826	3,278	2,667	2,716	22	2,144	1,660	0
36 UNIV OF MASS AT AMHERST	3,442	4,137	3,443	2,784	905	1,632	905	0
37 NORTHWESTERN UNIVERSITY	3,363	4,043	3,737	3,208	0	2,221	1,142	0
38 UNIVERSITY OF UTAH	3,363	3,043	2,796	6,487	0	2,373	990	0
39 UNIV OF CAL SANTA BARBARA	3,339	2,764	2,216	1,901	0	1,262	1,698	379
40 CARNEGIE-MELLON UNIV	3,291	3,359	3,986	2,872	0	1,515	1,776	0
TOTAL, 1ST 40 INSTS.	398,705	355,448	268,299	232,948	31,911	107,321	226,294	35,579
41 GEORGIA INSTITUTE OF TECH	3,290	3,161	2,446	2,420	0	2,118	1,172	0
42 PENNSYLVANIA STATE UNIV	3,217	2,559	2,234	1,903	102	2,527	471	117
43 RICE UNIVERSITY	3,040	3,006I	2,668	2,256	1,319	841	880	0
44 RUTGERS THE ST UNIV OF NJ	3,025	2,843	2,501	2,250	0	1,310	1,715	0
45 BROWN UNIVERSITY	3,000	2,327	2,143	1,952	0	900	1,600	500
46 UNIV OF TEXAS AT DALLAS	2,933	3,261	2,519	-	0	86	2,673	174
47 MICHIGAN STATE UNIVERSITY	2,849	4,911	3,696	4,629	58	1,157	1,595	39
48 CASE WESTERN RESERVE UNIV	2,821	2,336	2,230	2,185	123	1,617	1,081	0
49 UNIVERSITY OF VIRGINIA	2,691	2,049	1,641	2,037E	141	1,114	1,436	0
50 UNIV OF SOUTHERN CAL	2,676	2,469	1,985	1,189	9	1,773	894	0
TOTAL, 1ST 50 INSTS.	428,247	384,370	292,362	253,769	33,263	120,764	237,911	36,409

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. -- FEDERALLY FINANCED EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL				ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
	1980	1979	1978	1977				
51 UNIV OF NEBRASKA-LINCOLN	2,602	1,608	1,308	771	0	1,909	693	0
52 DUKE UNIVERSITY	2,523	1,955	1,812	1,580	0	701	1,922	0
53 FLORIDA STATE UNIVERSITY	2,486	2,217	1,761I	1,647E	0	1,313	1,173	0
54 NEW YORK UNIVERSITY	2,360	1,988	1,781	1,661	0	843	1,517	0
55 UNIV OF NC AT CHAPEL HILL	2,339	2,211	1,963	2,153	0	1,752	587	0
56 UNIVERSITY OF OREGON MAIN	2,215	1,856	1,434	1,413	0	1,035	952	219
57 UNIV OF CAL DAVIS	2,198	1,618	1,210	1,198	0	1,230	958	0
58 COLORADO STATE UNIVERSITY	2,074	1,943	1,513	1,240	0	1,717	357	0
59 UNIVERSITY OF DENVER	2,024	1,766	1,553	1,367	0	856	1,158	0
60 UNIVERSITY OF FLORIDA	1,987E	2,191	1,654	1,046	0	1,214E	773E	0
TOTAL, 1ST 60 INSTS.	451,055	403,523	308,351	267,845	33,263	133,334	247,931	36,527
61 WASHINGTON UNIVERSITY	1,974	1,761	1,676	1,360	0	589	1,385	0
62 UNIV OF NEW HAMPSHIRE	1,916	1,727	2,018	1,240	1,092	143	674	7
63 WAYNE STATE UNIVERSITY	1,904	1,817	2,233	1,414	0	1,640	264	0
64 ARIZONA STATE UNIVERSITY	1,836	1,204	1,188	1,043	0	1,365	359	112
65 VA POLYTECH INST & ST U	1,796	1,458	1,227E	1,157	0	1,047	749	0
66 UNIV OF CAL SAN FRANCISCO	1,771	1,201	976	792	235	1,536E	0	0
67 UNIV OF CAL SANTA CRUZ	1,747	1,380	1,598	1,429	482	813	452	0
68 LOUISIANA STATE UNIV	1,736	1,232	1,349	1,158	0	873	860	3
69 CATHOLIC UNIV OF AMERICA	1,660	943	570	537	0	571	1,089	0
70 UNIVERSITY OF CONNECTICUT	1,653	1,446	1,017	1,011	0	773	880	0
TOTAL, 1ST 70 INSTS.	469,048	417,692	322,203	278,986	35,072	142,684	254,543	36,749
71 SUNY AT ALBANY	1,638	1,304	1,089	1,037	437	670	531	0
72 CUNY CITY COLLEGE	1,604	874	-	680	0	434	1,170	0
73 NORTHEASTERN UNIVERSITY	1,963I	1,378	1,011	989	0	451I	1,112I	0
74 UNIV OF CAL RIVERSIDE	1,545	1,444	1,203	1,120	0	588	957	0
75 BRANDEIS UNIVERSITY	1,536	1,365	1,115	1,153	0	791	745	0
76 U TENNESSEE KNOXVILLE	1,521I	1,521	1,266	1,168	0	841I	680I	0
77 UNIV OF ILL CHICAGO CIR	1,499	1,209	993	387	0	535	964	0
78 TEMPLE UNIVERSITY	1,492	1,306	1,154	1,285	0	355	348	789
79 RENSSELAER POLYTECH INST	1,480	876	843	788	0	962	345	173
80 UNIVERSITY OF KANSAS	1,477I	848I	756I	1,109	0	1,226I	251I	0
TOTAL, 1ST 80 INSTS.	484,403	429,817	331,233	288,702	35,509	149,537	261,646	37,711
81 BOSTON UNIVERSITY	1,417	1,157	1,041	1,126	356	549	512	0
82 SUNY AT BUFFALO	1,413	995	888	974	0	1,163	250	0
83 DREXEL UNIVERSITY	1,350	787	1,000	728	0	366	984	0
84 HOWARD UNIVERSITY	1,317	643	625	135	0	1,101	2	214
85 UNIVERSITY OF DELAWARE	1,246	1,055	841	825	0	877	369	0
86 ROCKEFELLER UNIVERSITY	1,212	1,029	794	804	0	485	727	0
87 BOSTON COLLEGE	1,210	856	632	636	0	533	677	0
88 SYRACUSE UNIVERSITY	1,181	1,152	1,063	858	0	396	785	0
89 WASHINGTON STATE UNIV	1,166	1,109	996	837	0	804	357	5
90 U OF HOUSTON CENTRAL CAM	1,086	723	1,511I	1,357	0	599	487	0
TOTAL, 1ST 90 INSTS.	497,001	439,323	340,624	296,962	35,865	156,410	266,796	37,930
91 LEHIGH UNIVERSITY	1,084	854	645	589	0	138	59	877
92 VANDERBILT UNIVERSITY	1,098	821	699	831	700	358	0	0
93 OREGON GRADUATE CENTER	1,010	785	637	-	0	428	582	0
94 UNIVERSITY OF WYOMING	995	1,069	1,278	1,802	0	188	807	0
95 OREGON STATE UNIVERSITY	984	936	833	886	0	759	225	0
96 CALIF ST UNIV LOS ANGELES	970	654	-	291	0	920	50	0
97 UNIV OF TEX CANCER CENTER	953	963	706	668	0	0	953	0
98 MONTANA STATE UNIVERSITY	950	1,066	943	1,023	0	282	668	0
99 UNIV OF ARK FAYETTEVILLE	949	340	362	300	0	370	96	483
100 CLARKSON COLLEGE OF TECH	937	854	641	543	0	719	219	0
TOTAL, 1ST 100 INSTS.	506,891	447,665	347,368	303,895	36,565	160,572	270,484	39,293
TOTAL, ALL OTHER INSTS.	48,441	43,475	44,978	38,874	1,132	28,777	16,433	2,129

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 9-28. -- R&D EXPENDITURES IN CHEMISTRY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	245,610	207,674	183,131	164,302	189,349	156,950	138,301	125,443
1 MASS INST OF TECHNOLOGY	6,764	5,324	6,242	4,735	6,311	5,021	5,837	4,351
2 UNIV OF WIS-MADISON	6,643	5,450	5,149	5,136	3,779	2,865	2,733	2,880
3 CALIFORNIA INST OF TECH	6,328	5,297	4,108	5,143	5,630	4,813	3,712	4,322
4 UNIV OF CAL BERKELEY	6,022	3,717	3,046	3,090	5,601	3,485	2,756	2,742
5 HARVARD UNIVERSITY	4,797E	4,283E	3,905E	2,958	3,631	3,241	3,396	2,566
6 STANFORD UNIVERSITY	4,788	4,159	3,549E	2,659	4,609	3,775	3,256	2,591
7 JOHNS HOPKINS UNIVERSITY	4,652	4,064E	1,160	1,160	4,444	3,968E	1,084	1,102
8 UNIV OF CAL SAN DIEGO	4,471	4,225	3,611	3,344	4,087	3,913	3,293	3,064
9 COLUMBIA UNIV MAIN DIV	4,437	3,531	3,321	2,975	4,054	3,202	2,954	2,747
10 UNIV OF ILL URBANA	4,261	3,963	3,211	2,938	3,424	2,696	2,426	2,045
TOTAL, 1ST 10 INSTS.	53,163	44,013	37,302	33,638	45,570	36,979	31,559	28,400
11 UNIV OF CAL LOS ANGELES	4,159	3,573	3,236	2,563	4,017	3,379	3,052	2,405
12 TEXAS A & M UNIVERSITY	4,097	3,715	3,261	3,894	2,945	2,361	2,243	2,205
13 UNIV OF TEXAS AT AUSTIN	3,970	3,373	3,057	2,361	2,564	2,282	1,931	1,285
14 UNIVERSITY OF CHICAGO	3,958E	3,418E	3,113E	2,789	3,558	3,039	2,303	2,684
15 CORNELL UNIVERSITY	3,808	3,414	3,423	3,048	3,404	3,087	3,137	2,888
16 UNIV OF PENNSYLVANIA	3,688	2,211	1,761	973	3,143	1,840	1,356	762
17 GEORGIA INSTITUTE OF TECH	3,655	3,577	2,784	2,013	2,119	2,110	1,551	1,075
18 PURDUE UNIVERSITY	3,596	3,438	2,857	2,565	3,151	3,087	2,550	2,173
19 UNIVERSITY OF NOTRE DAME	3,457	2,746	2,475	2,560	3,328	2,618	2,389	2,461
20 UNIVERSITY OF COLORADO	3,332	2,544	899	992	2,605	1,942	588	902
TOTAL, 1ST 20 INSTS.	90,883	76,022	64,168	57,376	76,403	62,724	53,239	47,241
21 INDIANA UNIV	3,147	2,644	2,234	1,616	2,635	2,306	1,959	1,484
22 PENNSYLVANIA STATE UNIV	2,973	2,303	1,904	1,452	2,527	1,989	1,590	1,309
23 UNIVERSITY OF UTAH	2,811	2,290	2,754	7,149	2,373	1,949	1,939	5,636
24 FLORIDA STATE UNIVERSITY	2,791	2,478	1,490I	1,470	1,313	1,160	777I	727E
25 UNIV OF MD COLLEGE PARK	2,766	1,907	1,975	1,389	2,292	1,628	1,590	959
26 OHIO STATE UNIVERSITY	2,654	2,039	1,740	2,015	2,144	1,743	1,493	1,738
27 UNIVERSITY OF MINNESOTA	2,642	2,162	1,803	1,667	2,143	1,624	1,415	1,279
28 NORTHWESTERN UNIVERSITY	2,367	1,851	1,854	1,250	2,221	1,671	1,531	1,068
29 UNIV OF SOUTHERN CAL	2,313	2,181	1,676	764	1,773	1,731	1,381	722
30 UNIV OF NEBRASKA-LINCOLN	2,289	1,745	1,040	391	1,909	983	769	347
TOTAL, 1ST 30 INSTS.	117,636	97,622	82,638	76,539	97,733	79,508	67,373	62,510
31 UNIVERSITY OF FLORIDA	2,283E	1,968	1,265	769	1,219E	1,339	1,077	686
32 WAYNE STATE UNIVERSITY	2,163	2,022	2,740	1,280	1,640	1,555	1,926	1,172
33 UNIVERSITY OF ROCHESTER	2,089	2,536	2,100	1,987	1,667	2,056	1,695	1,519
34 CARNEGIE-MELLON UNIV	2,075	1,957	3,828	4,425	1,515	1,403	1,542	1,079
35 PRINCETON UNIVERSITY	2,065	2,242	1,660	1,508	1,646	1,621	1,271	1,113
36 UNIVERSITY OF MICHIGAN	2,064	1,406	1,171	851	1,775	1,229	982	604
37 YALE UNIVERSITY	2,023	2,107	1,444	1,532	1,886	1,750	1,379	1,455
38 COLORADO STATE UNIVERSITY	1,973	1,774	1,398	1,100	1,717	1,579	1,193	853
39 SUNY AT STONY BROOK	1,966	1,801	1,637	1,201	1,632	1,554	1,231	1,050
40 CASE WESTERN RESERVE UNIV	1,938	1,413	1,190	1,199	1,617	1,145	940	973
TOTAL, 1ST 40 INSTS.	138,275	116,846	101,071	92,391	114,042	94,739	81,159	73,014
41 UNIV OF MASS AT AMHERST	1,889	2,621	2,038	1,922	1,632	1,921	1,533	1,305
42 UNIV OF NC AT CHAPEL HILL	1,789	1,685	1,413	1,471	1,752	1,666	1,398	1,449
43 UNIV OF ARK FAYETTEVILLE	1,674E	1,180E	1,765	249	370	281	295	217
44 SUNY AT BUFFALO	1,665	1,143	1,008	966	1,163	817	735	894
45 UNIVERSITY OF PITTSBURGH	1,641	1,728	1,709	1,542	1,366	1,416	1,201	1,329
46 MICHIGAN STATE UNIVERSITY	1,638	1,491	1,262	1,266	1,157	1,045	978	1,063
47 VA POLYTECH INST & ST U	1,612	1,281	1,134E	987	1,047	875	714E	674
48 UNIV OF CAL SAN FRANCISCO	1,564	1,235	1,110	850	1,536E	1,201	976	792
49 LOUISIANA STATE UNIV	1,561	1,161	1,204	927	873	620	535	661
50 RENSSELAER POLYTECH INST	1,551	968	900	811	962	680E	553	605
TOTAL, 1ST 50 INSTS.	154,859	131,341	114,614	103,382	125,900	105,261	90,334	82,004

SEE FOOTNOTES AT END OF TABLE.

TABLE 3-28. -- R&D EXPENDITURES IN CHEMISTRY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
91 ARIZONA STATE UNIVERSITY	1,449	1,076	1,011	922	1,365	805	954	849
92 UNIV OF CAL SANTA BARBARA	1,434	1,089	974	859	1,262	979	886	793
93 RUTGERS THE ST UNIV OF NJ	1,406	991	755	649	1,310	939	715	620
94 UNIV OF CAL IRVINE	1,399	1,277	1,435	1,376	1,344	1,243	1,372	1,297
95 UNIVERSITY OF ARIZONA	1,380	1,269	1,390	1,512	953	860	881	1,145
96 U OF HOUSTON CENTRAL CAM	1,371	2,091	1,171I	1,025	599	659	537I	537
97 UNIVERSITY OF KANSAS	1,329I	957I	852I	1,102	1,226I	704I	528I	920
98 UNIVERSITY OF WASHINGTON	1,326	921	870	846	1,117	828	827	768
99 RICE UNIVERSITY	1,310	1,227I	1,092	1,033	841	747I	653	550
60 UNIVERSITY OF CONNECTICUT	1,300	1,185	741	1,313	773	701	425	495
TOTAL, 1ST 60 INSTS.	168,562	143,424	124,905	114,019	136,690	113,726	98,302	89,978
61 UNIV OF CAL DAVIS	1,290	838	625	630	1,230	798	587	549
62 HOWARD UNIVERSITY	1,287	756	505	139	1,101	629	442	118
63 UNIV OF OKLAHOMA NORMAN	1,275	869	620	474	617	441	514	403
64 UNIVERSITY OF VIRGINIA	1,203	813	807	1,354E	1,114	708	726	1,080E
65 UNIVERSITY OF GEORGIA	1,202	1,065	1,265	1,311	551	481	542	711
66 BROWN UNIVERSITY	1,200	1,036	983	914	900	876	881	777
67 ROCKEFELLER UNIVERSITY	1,170	1,110	953	660	485	498	348	331
68 IOWA ST U OF SCI & TECH	1,159	1,288	1,434	736	486	733	589	269
69 UNIVERSITY OF DELAWARE	1,158	1,015	791	795	877	730	504	650
70 CLARKSON COLLEGE OF TECH	1,157	926	772	659	719	628	530	498
TOTAL, 1ST 70 INSTS.	180,663	153,140	133,660	121,691	144,770	120,248	104,135	95,364
71 UNIVERSITY OF OREGON MAIN	1,119	1,074	872	738	1,035	889	755	564
72 OREGON STATE UNIVERSITY	1,068	1,065	594	1,018	759	766	538	802
73 WASHINGTON STATE UNIV	1,043	785	751	589	804	673	551	547
74 UNIVERSITY OF DENVER	1,007	636	742	602	856	555	585	425
75 CALIF ST UNIV LOS ANGELES	996	842	-	311	920	596	-	289
76 WRIGHT STATE UNIVERSITY	971	1,107	554	671	694	806	401	648
77 UNIV OF SOUTH CAROLINA	970E	933	914I	803	816E	785	714I	631
78 WASHINGTON UNIVERSITY	957	741	678	389	589	601	523	375
79 NEW YORK UNIVERSITY	943	585	661	536	843	486	529	459
80 U TENNESSEE KNOXVILLE	929I	929	799	653	841I	841	730	560
TOTAL, 1ST 80 INSTS.	190,666	161,837	140,225	128,001	152,927	127,246	109,631	100,663
81 UNIVERSITY OF IOWA	901	594	397	511	807	447	294	393
82 UNIV OF CAL SANTA CRUZ	900	710	854	722	813	643	779	663
83 DUKE UNIVERSITY	878	743	607	613	701	624	511	505
84 ATLANTA UNIVERSITY	867	852	550	84	742	740	451	19
85 GEORGETOWN UNIVERSITY	845	811	795	640	819	805	581	569
86 BRIGHAM YOUNG UNIVERSITY	837E	775	699I	576	569E	527	579I	554
87 BRANDEIS UNIVERSITY	832	769	600	684	791	702	577	639
88 OKLAHOMA STATE UNIVERSITY	769I	512I	545I	545	572I	271I	352I	377
89 POLYTECHNIC INST OF N Y	769E	720	725	640	515E	482	511	530
90 UNIV OF ILL CHICAGO CIR	764	705	431E	293	535	449	297	223
TOTAL, 1ST 90 INSTS.	199,028	169,028	146,428	133,309	159,791	132,936	114,773	105,135
91 SYRACUSE UNIVERSITY	764	691E	382	296	396	327	235	276
92 TEXAS TECH UNIVERSITY	757	736	750	716	391	309	332	252
93 ST JOHN'S UNIVERSITY (NY)	755	680	703	679	46	27	42	51
94 SUNY AT ALBANY	739E	599E	544E	437	670	537	455	412
95 OREGON GRADUATE CENTER	734	640	752	-	428	300E	251	-
96 DREXEL UNIVERSITY	731	323	485	431	366	292	425	368
97 UNIVERSITY OF AKRON	712	548	657	463	407	379	343	301
98 BOSTON UNIVERSITY	711	742	694	763	549	654	547	750
99 EMORY UNIVERSITY	705	368	316	234	612	319	270	199
100 UNIV OF WIS-MILWAUKEE	672	669	677	489	461	487	452	297
TOTAL, 1ST 100 INSTS.	206,308	175,024	152,388	137,817	164,117	136,567	119,295	108,041
TOTAL, ALL OTHER INSTS.	39,302	32,650	30,743	26,485	25,232	20,383	19,736	17,399

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DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. -- R&D EXPENDITURES IN PHYSICS AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	329,151	300,798	235,099	201,655	286,867	261,365	199,151	171,910
1 MASS INST OF TECHNOLOGY	36,635	31,429	28,989	21,261	35,540	30,344	27,740	19,879
2 JOHNS HOPKINS UNIVERSITY	27,939	26,780E	1,801	1,606	27,402	26,445E	1,768	1,571
3 STANFORD UNIVERSITY	12,557	14,262	12,071E	9,460	12,114	13,493	11,355	9,437
4 UNIV OF MD COLLEGE PARK	10,329	8,341	8,846	6,325	8,221	7,707	8,383	5,493
5 CORNELL UNIVERSITY	13,298	14,914	9,245	7,291	9,326	14,225	8,514	6,575
6 UNIV OF CAL SAN DIEGO	9,984	11,341	4,313	4,245	9,937	11,299	4,270	4,184
7 UNIVERSITY OF CHICAGO	9,400E	7,819E	7,059E	5,729	8,719	7,129	6,423	5,489
8 CALIFORNIA INST OF TECH	9,385	7,760	5,190	6,611	9,211	7,142	5,092	6,066
9 UNIV OF TEXAS AT AUSTIN	9,254	8,726	4,606	2,982	7,464	6,844	3,515	1,998
10 UNIVERSITY OF ARIZONA	7,200	6,187	5,941	5,588	5,045	4,688	3,553	4,370
TOTAL, 1ST 10 INSTS.	142,981	137,559	88,061	71,098	132,979	129,316	80,424	65,062
11 UNIV OF CAL LOS ANGELES	6,316	5,627	5,237	4,564	6,291	5,353	5,012	4,452
12 UNIV OF WIS-MADISON	6,090	5,082	4,299	4,242	4,985	4,077	3,476	3,445
13 UNIV OF ILL URBANA	5,864	4,815	4,051	3,497	4,982	3,992	3,210	3,122
14 UNIVERSITY OF IOWA	5,612	3,475	2,382	2,596	4,954	3,236	2,372	2,370
15 UNIV OF PENNSYLVANIA	5,374	5,386	4,043	4,123	4,911	3,601	3,636	3,453
16 INDIANA UNIV	5,312	4,294	4,127	2,942	4,870	4,021	3,804	2,856
17 HARVARD UNIVERSITY	5,303E	5,602E	4,619E	4,441	4,014	4,239	4,052	3,883
18 YALE UNIVERSITY	4,831	4,215	3,684	3,239	4,641	3,989	3,536	3,209
19 UNIVERSITY OF DAYTON	4,440	5,049E	3,134	2,497	4,121	4,402	2,752	2,215
20 UNIVERSITY OF ROCHESTER	4,254	4,092	3,901	3,558	3,591	3,508	3,320	3,023
TOTAL, 1ST 20 INSTS.	196,377	185,196	127,538	106,797	180,339	169,734	115,364	97,089
21 PRINCETON UNIVERSITY	4,200	3,761	3,297	2,920	3,803	3,281	3,028	2,745
22 UNIVERSITY OF MICHIGAN	3,976	2,912	2,319	2,086	3,599	2,475	2,134	1,734
23 UNIVERSITY OF WASHINGTON	3,849	3,339	2,960	2,910	3,797	3,267	2,899	2,499
24 UNIVERSITY OF COLORADO	3,848	3,044	1,648	1,342	3,200	2,545	1,293	1,080
25 SUNY AT STONY BROOK	3,777	3,469	2,946	1,753	2,597	2,477	1,918	1,680
26 UNIVERSITY OF MINNESOTA	3,535	2,664	2,983	3,546	2,859	2,251	2,483	3,093
27 UNIV OF CAL IRVINE	3,387	2,386	1,939	1,836	3,380	2,386	1,938	1,825
28 UNIV OF TEXAS AT DALLAS	3,122	3,407	2,468	-	2,673	3,050	2,297	-
29 UNIV OF CAL BERKELEY	2,832	1,727	1,414	1,449	2,732	1,648	1,380	1,374
30 PURDUE UNIVERSITY	2,779	2,257	1,979	1,872	2,666	2,129	1,947	1,780
TOTAL, 1ST 30 INSTS.	231,682	214,162	151,491	126,511	211,645	195,243	136,491	114,900
31 UNIVERSITY OF PITTSBURGH	2,753	2,549	3,118	2,257	2,575	2,367	2,546	2,074
32 FLORIDA STATE UNIVERSITY	2,699	2,081	1,520I	1,492	1,173	856	855I	799E
33 RUTGERS THE ST UNIV OF NJ	2,555	2,608	2,405	2,237	1,715	1,904	1,736	1,605
34 MICHIGAN STATE UNIVERSITY	2,161	2,612	1,530	2,716	1,595	1,309	1,139	1,600
35 OHIO STATE UNIVERSITY	2,024	1,675	1,386	1,134	1,660	1,489	1,152	966
36 GEORGIA INSTITUTE OF TECH	2,023	1,781	1,606	2,410	1,172	1,051	995	1,345
37 DUKE UNIVERSITY	1,921	1,405	1,381	1,134	1,822	1,331	1,331	1,075
38 ROCKEFELLER UNIVERSITY	1,840	1,609	1,464	1,081	727	531	446	473
39 CARNEGIE-MELLON UNIV	1,796	1,992	4,669	1,874	1,776	1,956	2,444	1,793
40 LOUISIANA STATE UNIV	1,777	1,340	1,456	1,228	860	612	714	497
TOTAL, 1ST 40 INSTS.	253,231	233,814	172,026	144,074	226,720	208,649	149,689	127,128
41 COLUMBIA UNIV MAIN DIV	1,718	1,701	1,261	1,240	1,608	1,625	1,214	1,171
42 UNIV OF CAL SANTA BARBARA	1,713	1,619	1,143	833	1,698	1,606	1,132	809
43 BROWN UNIVERSITY	1,700	1,491	1,333	1,269	1,600	1,451	1,252	1,175
44 UNIV OF TEX CANCER CENTER	1,672	1,588	1,246	1,203	953	963	706	668
45 NEW YORK UNIVERSITY	1,658	1,659	1,519	1,371	1,517	1,502	1,252	1,203
46 UNIVERSITY OF VIRGINIA	1,587	1,424	893	1,047E	1,436	1,221	799	869E
47 UNIVERSITY OF CONNECTICUT	1,465	1,284	1,035	1,366	880	745	592	516
48 WASHINGTON UNIVERSITY	1,402	1,579	1,142	1,020	1,395	1,160	1,053	985
49 NORTHEASTERN UNIVERSITY	1,375I	1,223	905	763	1,112I	980	655	567
50 UNIVERSITY OF DENVER	1,374	1,372	1,160	1,224	1,169	1,211	958	942
TOTAL, 1ST 50 INSTS.	268,895	248,754	183,663	155,410	240,077	221,113	159,322	136,033

SEE FOOTNOTES AT END OF TABLE.

TABLE B-29. -- R&D EXPENDITURES IN PHYSICS AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 TEXAS A & M UNIVERSITY	1,330	663	550	852	1,011	568	424	740
52 CATHOLIC UNIV OF AMERICA	1,316	889	635	567	1,089	699	432	443
53 UNIVERSITY OF FLORIDA	1,306E	1,126	718	412	773E	852	577	360
54 UNIV OF CAL DAVIS	1,283	763	780	764	968	620	623	649
55 NORTHWESTERN UNIVERSITY	1,263	1,254	1,061	879	1,142	1,160	955	815
56 SYRACUSE UNIVERSITY	1,257	1,217	2,373	596	785	825	758	582
57 UNIV OF ILL CHICAGO CIR	1,229	1,014	313E	171	964	760	296E	164
58 CUNY CITY COLLEGE	1,209	764	-	731	1,170	722	-	537
59 CASE WESTERN RESERVE UNIV	1,206	1,231	1,209	1,164	1,081	1,072	1,168	1,094
60 UNIV OF MISSOURI ROLLA	1,199	1,287	1,142	888	506	598	507	399
TOTAL, 1ST 60 INSTS.	281,492	258,962	192,444	162,434	249,566	228,989	165,122	141,806
61 DREXEL UNIVERSITY	1,178	555	655	441	984	495	575	360
62 UNIVERSITY OF OREGON MAIN	1,121	918	810	948	962	765	679	679
63 UNIV OF MASS AT AMHERST	1,066	1,267	1,026	839	905	1,108	905	739
64 UNIVERSITY OF UTAH	1,047	1,171	946	934	990	1,094	937	851
65 UNIV OF NEBRASKA-LINCOLN	1,045	1,203	747	451	693	625	531	424
66 UNIVERSITY OF NOTRE DAME	1,025	850	822	471	959	808	773	827
67 UNIV OF SOUTHERN CAL	1,024	900	707	475	894	738	504	440
68 UNIV OF CAL RIVERSIDE	1,010	868	710	732	957	849	579	699
69 UNIV OF HAWAII-MANOA	999	[illegible]	810	708	999	751	810	708
70 OREGON GRADUATE CENTER	998	1,[illegible]	1,083	-	582	485	376	-
TOTAL, 1ST 70 INSTS.	292,005	268,476	200,760	168,833	258,490	236,707	171,961	147,532
71 VA POLYTECH INST & ST U	992	801	623E	542	749	583	394E	372
72 RICE UNIVERSITY	920	1,031I	915	692	880	987I	876	659
73 N C STATE UNIV AT RALEIGH	818	400	250	229	654	287	158	164
74 UNIVERSITY OF WYOMING	807	936	1,240	1,959	807	931	1,179	1,679
75 BRANDEIS UNIVERSITY	775	667	538	517	745	663	538	514
76 UNIV OF NEW HAMPSHIRE	769	348	294	155	674	243	215	149
77 BOSTON COLLEGE	759	609	408	351	677	488	336	337
78 U OF HOUSTON CENTRAL CAM	735	542	694I	613	487	64	559I	504
79 MONTANA STATE UNIVERSITY	718	565	591	404	668	496	517	404
80 U TENNESSEE KNOXVILLE	710I	710	611	630	680I	680	556	609
TOTAL, 1ST 80 INSTS.	300,008	275,085	206,924	174,955	265,511	242,129	177,239	152,931
81 EMMANUEL COLLEGE	698E	913I	-	723E	693	913I	-	723E
82 UNIV OF MAINE ORONO	693	528	197	180	379	447	122	169
83 STEVENS INSTITUTE OF TECH	661	508	642	415	417	288	234	368
84 TUFTS UNIVERSITY	601	373I	348I	314	600	364I	340I	307
85 PENNSYLVANIA STATE UNIV	594	325	474	363	471	303	333	347
86 UNIV OF NC AT CHAPEL HILL	587	546	575	706	587	545	555	705
87 SUNY AT ALBANY	580E	483E	466E	398	531	382	384	315
88 UNIV ALABAMA HUNTSVILLE	579	240	237	333	579	240	229	326
89 RENSSELAER POLYTECH INST	557	278	250	244	345	196E	183	183
90 UNIVERSITY OF GEORGIA	541	508	457	339	199	172	195	151
TOTAL, 1ST 90 INSTS.	306,097	279,787	210,570	178,969	270,308	245,979	179,874	156,525
91 UNIV OF ALASKA FAIRBANKS	512	432	3,322	3,063	356	286	3,202	2,098
92 BOSTON UNIVERSITY	512	318	235	265	512	318	211	220
93 UNIV OF CAL SANTA CRUZ	500	394	555	469	452	358	535	431
94 UNIVERSITY OF NEW MEXICO	495	406	559	325	495	390	435	287
95 OHIO UNIVERSITY	485	341	215	287	293	207	135	205
96 NORTHERN ILLINOIS UNIV	479	287	125	86I	207	127	124	72I
97 OKLAHOMA STATE UNIVERSITY	474I	336I	344I	341	326I	155I	237I	216
98 COLLEGE OF WILLIAM & MARY	468I	468	343I	411	443I	443	339I	409
99 UNIVERSITY OF DELAWARE	464	387	278	233	369	325	237	175
100 WASHINGTON STATE UNIV	442E	424	372	295	357	323	345	290
TOTAL, 1ST 100 INSTS.	310,92[illegible]	283,580	216,918	184,744	274,118	248,911	185,715	160,929
TOTAL, ALL OTHER INSTS.	18,223	17,218	18,121	16,911	12,749	12,454	13,446	10,932

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-30. -- R&D EXPENDITURES IN THE ENVIRONMENTAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	506,064	450,669	377,548	317,507	371,414	328,791	274,794	238,240
1 UNIV OF CAL SAN DIEGO	59,965	53,310	52,635	47,946	52,191	46,671	45,573	42,277
2 UNIV OF ALASKA FAIRBANKS	28,622	25,987	20,336	17,458	20,997	20,165	15,212	14,173
3 JOHNS HOPKINS UNIVERSITY	28,447	24,205E	2,405	2,318	26,856	23,883E	1,324	1,315
4 WOODS HOLE OCNGRPHIC INST	25,683	24,747	23,176	18,386	21,801	21,712	20,139	15,749
5 COLUMBIA UNIV MAIN DIV	17,886	13,637	12,519	13,232	17,638	13,216	11,936	12,735
6 UNIVERSITY OF WASHINGTON	16,413	13,047	11,254	10,593	14,962	11,755	10,113	9,416
7 UNIV OF TEXAS AT AUSTIN	13,452	10,789	9,846	8,315	5,627	4,425	4,920	4,253
8 UNIV OF WIS-MADISON	13,130	11,910	11,054	9,857	8,528	7,851	7,456	6,319
9 UNIVERSITY OF MIAMI	12,491	11,765	9,897	7,566	8,336	8,926	6,733	6,040
10 UNIVERSITY OF MICHIGAN	12,147	12,188	8,616	4,469	8,657	8,178	5,733	2,389
TOTAL, 1ST 10 INSTS.	228,236	201,585	161,738	140,140	185,593	166,782	131,026	114,665
11 UNIVERSITY OF ARIZONA	12,105	10,111	7,832	4,623	3,787	3,817	2,557	1,918
12 UNIV OF RHODE ISLAND	11,385I	10,541I	8,205I	7,232	10,379I	9,614I	8,050I	7,132
13 OREGON STATE UNIVERSITY	10,176	9,024	9,563	6,091	7,924	7,301	8,042	5,254
14 UNIV OF HAWAII-MANOA	9,720	9,001	7,198	7,314	7,320	6,510	5,023	5,205
15 MASS INST OF TECHNOLOGY	8,912	8,537	7,146	6,960	8,593	8,247	6,936	6,733
16 LOUISIANA STATE UNIV	7,503	6,501	6,244	3,368	4,921	3,766	2,358	1,287
17 UNIV OF OKLAHOMA NORMAN	7,462	3,117	1,296	713	3,606	2,361	1,033	605
18 UNIV OF ILL URBANA	7,405	7,160	6,936	5,964	3,927	4,005	4,192	3,906
19 CALIFORNIA INST OF TECH	7,266	6,414	5,183	5,671	6,341	5,928	4,527	4,726
20 PENNSYLVANIA STATE UNIV	7,181	6,180	6,007	5,288	4,515	3,765	3,708	3,660
TOTAL, 1ST 20 INSTS.	317,351	278,171	227,348	193,364	246,906	222,087	177,492	155,091
21 UNIV OF CAL LOS ANGELES	6,721	5,359	5,416	4,775	5,312	4,213	4,378	3,854
22 UNIV OF SOUTHERN CAL	6,601	3,284	3,501	1,497	4,301	1,946	2,517	1,140
23 UNIVERSITY OF COLORADO	5,641	3,977	2,631	1,887	4,781	3,196	2,137	1,585
24 TEXAS A & M UNIVERSITY	5,567	5,745	6,864	5,681	4,961	4,958	5,930	4,584
25 HARVARD UNIVERSITY	5,548E	2,324E	4,671E	4,086	4,199	1,753	4,244	3,712
26 UTAH STATE UNIVERSITY	4,886	3,105	2,090	2,180	4,245	2,738	1,777	1,945
27 UNIV OF NEBRASKA-LINCOLN	4,865	5,955	3,941	3,389	1,716	1,881	2,312	1,580
28 DESERT RESEARCH INSTITUTE	4,855	5,484	4,143	2,979	2,381	2,417	1,869	1,901
29 SUNY AT STONY BROOK	3,900	3,096	2,608	1,164	2,676	2,125	1,533	1,027
30 FLORIDA STATE UNIVERSITY	3,594	2,610	2,425I	2,338	2,090	1,518	1,735I	1,670E
TOTAL, 1ST 30 INSTS.	369,529	319,110	265,636	223,340	283,568	248,832	206,084	178,090
31 CORNELL UNIVERSITY	3,363	2,887	1,512	1,053	3,268	2,886	1,497	1,029
32 UNIVERSITY OF WYOMING	3,170	2,474	2,854	2,683	2,436	2,056	2,221	1,895
33 N C STATE UNIV AT RALEIGH	3,153	2,624	2,121	1,865	1,521	1,015	1,011	996
34 UNIV OF CAL SANTA BARBARA	3,112	2,883	2,025	1,188	2,173	1,882	1,533	888
35 UNIVERSITY OF DELAWARE	3,109	3,086	2,928	2,214	1,789	1,688	1,529	1,061
36 UNIV OF NC AT CHAPEL HILL	3,060	3,087	2,869	2,263	1,761	1,623	1,825	1,383
37 PRINCETON UNIVERSITY	2,921	2,832	2,386	2,052	2,020	1,929	1,819	1,629
38 UNIVERSITY OF UTAH	2,859	3,853	2,770	1,909	2,395	3,307	2,505	1,454
39 RUTGERS THE ST UNIV OF NJ	2,859	3,017	3,130	1,899	545	471	551	509
40 UNIV OF MAINE ORONO	2,826	3,041	2,684	1,700	1,473	1,587	1,344	1,455
TOTAL, 1ST 40 INSTS.	399,961	348,894	290,917	242,166	302,949	267,276	221,939	190,389
41 MICHIGAN STATE UNIVERSITY	2,542	2,535	1,810	2,189	1,157	1,196	753	799
42 UNIV OF MASS AT AMHERST	2,524	2,734	2,755	2,378	815	725	815	847
43 UNIV OF CAL BERKELEY	2,512	2,232	1,584	1,620	1,916	1,751	1,166	965
44 VA POLYTECH INST & ST U	2,444	2,586	1,592E	1,387	1,959	1,812	839E	848
45 GEORGIA INSTITUTE OF TECH	2,404	3,695	2,379	369	1,393	2,180	1,325	187
46 SUNY AT ALBANY	2,328E	2,528E	2,029E	1,484	1,472	1,627	1,256	900
47 STANFORD UNIVERSITY	2,313	2,790	2,584E	3,466	1,435	2,107	1,974	3,115
48 COLORADO STATE UNIVERSITY	2,249	2,780	2,486	2,280	2,071	2,354	2,134	2,022
49 UNIVERSITY OF MINNESOTA	2,190	2,617	1,824	1,465	1,110	1,114	839	776
50 UNIVERSITY OF CHICAGO	2,159E	2,186E	2,267E	1,785	1,969	1,970	2,081	1,758
TOTAL, 1ST 50 INSTS.	423,626	375,577	312,227	260,589	318,246	284,112	235,151	202,606

SEE FOOTNOTES AT END OF TABLE.

TABLE 9-30. -- R&D EXPENDITURES IN THE ENVIRONMENTAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 UNIVERSITY OF GEORGIA	2,149	1,638	1,943	1,542	1,202	874	995	898
52 WENTWORTH INST OF TECH	2,104	1,373	-	913	2,088	1,335	-	863
53 BROWN UNIVERSITY	2,100	1,479	1,278	1,148	1,900	1,134	1,177	1,049
54 N MEX INST MINING & TECH	1,994	1,962	1,312	798	1,531	1,099	550	542E
55 UNIV OF NEW HAMPSHIRE	1,929	1,765	1,184	737	1,415	1,037	238	43
56 CARNEGIE-MELLON UNIV	1,754	1,644	0	0	338	193	0	0
57 UNIV OF SOUTH CAROLINA	1,691E	1,626	756I	663	1,520E	1,461	505I	447
58 UNIVERSITY OF VIRGINIA	1,680	1,394	1,117	1,142E	1,404	1,193	953	998E
59 UNIV OF WIS-MILWAUKEE	1,549	1,303	979	1,223	773	546	319	268
60 UNIVERSITY OF KANSAS	1,506I	2,945I	2,612I	2,258	393I	225I	201I	295
TOTAL, 1ST 60 INSTS.	442,086	392,686	323,388	271,013	330,810	293,209	240,248	208,009
61 OHIO STATE UNIVERSITY	1,464	1,320	1,190	964	943	800	745	609
62 SUNY COL OF ENV SCI & FOR	1,362	732	712	649	459	148	146	333
63 MONT COL MINRL SCI & TECH	1,301	855	-	726	1,275	787	-	676
64 BOSTON COLLEGE	1,264	1,039	947	959	1,173	953	888	837
65 US NAVAL POSTGRAD SCHOOL	1,264	1,166	1,057	687	1,196	1,124	959	680
66 COLORADO SCHOOL OF MINES	1,252	349I	310	0	1,048	300I	257	0
67 NEW MEXICO STATE UNIV	1,215	445	962I	796	633	228	530I	439
68 UNIVERSITY OF PITTSBURGH	1,144	1,044	1,365	181	901	635	994	155
69 SOUTHERN ILL U-CARBONDALE	1,121	398	286	559	644	189	12	80
70 UNIVERSITY OF GUAM	1,112	387I	-	317	647	152I	-	113
TOTAL, 1ST 70 INSTS.	454,585	400,421	330,217	276,851	339,729	298,525	244,719	211,931
71 SUNY COLLEGE BUFFALO	1,085I	962I	-	746	1,082I	962I	-	720
72 IOWA ST U OF SCI & TECH	1,033	1,082	369	137	332	140	22	39
73 UNIV OF CAL SANTA CRUZ	1,007	855	573	481	920	765	530	421
74 UNIVERSITY OF CONNECTICUT	1,007	1,073	849	1,303	602	629	436	492
75 DUKE UNIVERSITY	1,000	1,002	666	1,290	939	928	631	1,240
76 NORTH TEXAS STATE UNIV	977E	935	798	8	774E	730	524	0
77 UNIV OF MO CENTRAL OFF	953	871	1,146	875	168	144	154	82
78 S DAK SCH MINES & TECH	952I	952	725	700I	580I	580	559	463I
79 NOVA UNIVERSITY	920I	818	1,014	1,007E	545I	481	767	727E
80 OREGON GRADUATE CENTER	911	814	782	-	531	383	271	-
TOTAL, 1ST 80 INSTS.	464,430	409,785	337,139	283,398	346,201	304,267	248,543	216,135
81 UNIVERSITY OF NEW MEXICO	886	892	916	665	546	378	259	412
82 ARIZONA STATE UNIVERSITY	864	898	321	279	751	440	232	152
83 UNIVERSITY OF KENTUCKY	863	678	651	441	459	359	491	221
84 PURDUE UNIVERSITY	841	776	618	454	784	710	554	401
85 SAN JOSE STATE UNIVERSITY	829I	704E	-	670	396I	352E	-	335
86 UNIVERSITY OF IDAHO	801	846	715	254	708	682	497	142
87 UNIVERSITY OF OREGON MAIN	785	617	326	495	565	439	296	293
88 MONTANA STATE UNIVERSITY	781	71	442	924	388	14	327	564
89 U OF HOUSTON CENTRAL CAM	768	610	181I	158	370	125	54I	57
90 UNIVERSITY OF N DAKOTA	756I	703I	625	485	619I	573I	511	428
TOTAL, 1ST 90 INSTS.	472,603	416,[illegible]	341,398	287,826	351,766	308,339	251,442	218,941
91 SUNY AT BUFFALO	750	477	469	247	595	369	327	234
92 YALE UNIVERSITY	733	715	657	667	719	619	598	620
93 OLD DOMINION U RES FDN	732I	340	150I	117	0	304	138I	110
94 UNIV OF TEXAS AT DALLAS	711	652	553	-	285	358	375	-
95 WASHINGTON UNIVERSITY	693	830	422	109	666	427	338	108
96 U TENNESSEE KNOXVILLE	689I	689	592	141	645I	645	537	109
97 INSTITUTE PAPER CHEMISTRY	682E	647	559	469	7E	7	49	24
98 SOUTHERN METHODIST UNIV	674	465	544	387E	483	408	434	387
99 ST LOUIS UNIVERSITY	672	672	593	383I	604	604	538	383I
100 KANS ST U - AG & AMP SCI	671	521	520	470	293	231	245	201
TOTAL, 1ST 100 INSTS.	479,610	422,548	346,407	290,816	356,062	312,311	255,131	221,117
TOTAL, ALL OTHER INSTS.	26,454	28,121	31,141	26,691	15,352	16,480	19,553	17,123

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-31. -- R&D EXPENDITURES IN MATHEMATICAL AND COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	191,940	176,012	126,178	107,868	137,997	129,662	85,344	78,178
1 JOHNS HOPKINS UNIVERSITY	42,018	40,150E	218	198	41,789	39,583E	238	178
2 MASS INST OF TECHNOLOGY	9,002	7,935	7,699	8,862	7,200	7,055	6,926	7,142
3 STANFORD UNIVERSITY	7,123	7,705	6,694E	3,611	6,406	6,904	5,999	3,452
4 CARNEGIE-MELLON UNIV	5,923	4,313	3,559	3,015	4,906	3,808	2,468	2,957
5 UNIV OF ILL URBANA	3,384	4,130	8,835	4,900	2,419	1,713	2,646	4,315
6 UNIV OF MD COLLEGE PARK	5,116	4,324	4,267	3,859	1,805	1,619	1,380	1,481
7 NEW YORK UNIVERSITY	5,004	4,980	4,837	4,109	4,775	4,624	4,329	4,022
8 UNIV OF WIS-MADISON	4,610	4,254	3,552	3,093	3,248	3,121	2,825	2,391
9 PENNSYLVANIA STATE UNIV	4,475	3,961	3,885	3,425	444	365	393	307
10 GEORGIA INSTITUTE OF TECH	4,288	4,652	3,371	713	2,405	2,744	1,878	363
TOTAL, 1ST 10 INSTS.	92,939	86,404	46,917	35,718	75,479	71,536	29,932	26,608
11 WASHINGTON UNIVERSITY	4,050	210	135	99	3,813	180	120	99
12 UNIV OF PENNSYLVANIA	3,465	2,066	2,483	1,711	2,389	1,718	1,730	1,435
13 FLORIDA STATE UNIVERSITY	3,247	2,037	1,721I	1,753	420	319	390I	365E
14 UNIV OF TEX CANCER CENTER	3,046	3,025	2,352	2,551	1,667	1,703	1,223	1,538
15 RUTGERS, THE ST UNIV OF NJ	3,014	2,093	1,506	1,430	1,525	1,460	1,342	1,071
16 UNIV OF TEXAS AT AUSTIN	2,996	1,770	1,364	899	1,424	1,516	1,175	679
17 UNIVERSITY OF DAYTON	2,178	1,308	1,015	809	2,018	1,140	588	715
18 IOWA ST U OF SCI & TECH	2,175	2,140	1,759	1,818	532	530	438	567
19 CALIFORNIA INST OF TECH	2,142	1,083	1,026	629	1,524	620	471	577
20 YALE UNIVERSITY	2,026	2,230	1,163	876	1,867	1,946	1,125	857
TOTAL, 1ST 20 INSTS.	121,267	104,366	61,441	48,293	92,659	82,668	39,534	34,511
21 ST JOHN'S UNIVERSITY (NY)	2,003	1,845	1,581	1,289	0	0	0	0
22 PRINCETON UNIVERSITY	1,902	1,811	1,359	1,286	1,375	1,509	1,143	1,109
23 BROWN UNIVERSITY	1,900	1,631	1,444	1,316	1,870	1,569	1,369	1,224
24 BOSTON COLLEGE	1,863	1,473	1,130	938	1,743	1,390	1,116	929
25 HARVARD UNIVERSITY	1,820E	1,522E	1,105E	812	1,378	1,153	1,027	755
26 UNIVERSITY OF PITTSBURGH	1,789	1,952	1,398	1,496	711	893	793	902
27 UNIV OF CAL BERKELEY	1,712	1,336	1,373	1,368	1,582	1,222	1,220	1,092
28 UNIVERSITY OF MICHIGAN	1,672	2,524	1,596	1,857	773	1,122	776	665
29 GEORGE WASHINGTON UNIV	1,554	1,554	3,557	3,650	1,181	1,186	3,158	3,388
30 CORNELL UNIVERSITY	1,543	1,515	838	1,094	1,351	1,179	786	1,025
TOTAL, 1ST 30 INSTS.	139,025	121,559	76,822	63,399	104,622	93,891	49,932	45,599
31 PURDUE UNIVERSITY	1,476	1,167	913	987	1,322	1,014	778	857
32 UNIVERSITY OF MINNESOTA	1,398	1,333	1,181	914	902	914	782	565
33 UNIVERSITY OF GEORGIA	1,347	1,353	1,083	880	722	623	398	377
34 UNIVERSITY OF UTAH	1,313	959	884	1,104	964	434	833	755
35 NEW YORK INST TECHNOLOGY	1,264	1,660	-	279	0	0	-	0
36 OHIO STATE UNIVERSITY	1,250	1,229	1,187	872	820	707	733	534
37 ROCKEFELLER UNIVERSITY	1,156	1,113	1,048	534	216	214	186	82
38 SYRACUSE UNIVERSITY	1,125	992	676	491	849	729	533	431
39 UNIVERSITY OF CHICAGO	1,103E	1,125E	1,326E	1,085	1,002	1,000	1,138	1,041
40 N C STATE UNIV AT RALEIGH	1,037	677	477	633	415	210	37	55
TOTAL, 1ST 40 INSTS.	151,494	133,167	85,597	71,098	111,834	99,736	55,313	50,299
41 LOUISIANA STATE UNIV	1,029	759	581	424	99	95	58	91
42 GALLAUDET COLLEGE	932I	710I	-	577	0	0I	-	0
43 SUNY AT STONY BROOK	900	1,037	786	615	641	740	516	486
44 UNIVERSITY OF WASHINGTON	900	1,281	1,224	779	869	1,242	1,213	712
45 UNIVERSITY OF ROCHESTER	875	559	626	504	722	442	426	322
46 UNIVERSITY OF ARIZONA	802	617	263	211	549	343	122	178
47 LOMA LINDA UNIVERSITY	779E	825I	681I	631	593E	690I	396I	429
48 OREGON STATE UNIVERSITY	776	506	647	390	230	156	230	94
49 SUNY AT BUFFALO	775	912	1,306	1,837	462	604	947	1,785
50 UNIV OF ILL CHICAGO CIR	769	883	375E	295	420	472	353	294
TOTAL, 1ST 50 INSTS.	160,031	141,254	92,086	77,361	116,419	104,520	59,561	54,689

SEE FOOTNOTES AT END OF TABLE.

TABLE B-31. -- R&D EXPENDITURES IN MATHEMATICAL AND COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 UNIV OF OKLA HLTH SCI CTR	768	0	0	-	0	0	0	-
52 UNIV OF NC AT CHAPEL HILL	744	4,817	4,455	3,814	711	4,676	4,220	3,621
53 UNIVERSITY OF CONNECTICUT	725	573	610	331	433	335	350	125
54 UNIV OF CAL SAN DIEGO	705	800	431	310	430	466	344	304
55 US NAVAL PGSTGRAD SCHOOL	699	661	676	1,039	699	661	539	1,039
56 LEHIGH UNIVERSITY	697	624	431	365	368	357	230	239
57 UNIVERSITY OF COLORADO	690	1,014	834	1,086	482	650	511	484
58 MICHIGAN STATE UNIVERSITY	678	593	299	1,211	491	173	134	155
59 UNIV OF MASS AT AMHERST	660	948	636	678	504	811	534	408
60 UNIV OF CAL LOS ANGELES	660	598	504	656	629	570	491	610
TOTAL, 1ST 60 INSTS.	167,097	151,884	100,962	86,851	121,165	113,219	67,134	61,673
61 UNIV OF CAL SANTA BARBARA	660	657	403E	227	481	529	235E	156
62 COLORADO STATE UNIVERSITY	649	677	510	543	447	422	278	341
63 ILLINOIS INST OF TECH	649I	575E	64	134	551I	486E	54	134
64 NORTHERN ILLINOIS UNIV	627	513	162	261	194	119	158	171
65 UNIV OF CAL SANTA CRUZ	600	473	171	144	543	4[illegible]	156	132
66 COLUMBIA UNIV MAIN DIV	598	470	499	430	573	4[illegible]	477	410
67 INDIANA UNIV	591	511	406	316	409	38[illegible]	318	308
68 RENSSELAER POLYTECH INST	563	355	351	360	349	249	257	269
69 TEXAS A & M UNIVERSITY	546	372	351	297	480	33[illegible]	321	240
70 WAYNE STATE UNIVERSITY	527	183	223	75	175	131	139	55
TOTAL, 1ST 70 INSTS.	173,067	156,670	104,102	89,403	125,366	116,756	69,537	63,746
71 UNIV OF ARK PINE BLUFF	510	409	-	350	0	0	-	0
72 UNIV OF P R-RIO PIEDRAS	498I	435I	386	23	261I	226I	201	0
73 DENISON UNIVERSITY	479E	409	-	2	196E	168	-	0
74 UNIVERSITY OF FLORIDA	449E	387	406	470	239E	264	234	67
75 RICE UNIVERSITY	437	273I	242	220	363	273I	242	220
76 N J INST OF TECHNOLOGY	424	681	440	429	424	681	440	429
77 UNIVERSITY OF NEW ORLEANS	423	429	317	39	0	0	10	0
78 DUKE UNIVERSITY	408	332	302	320	357	331	299	319
79 DREXEL UNIVERSITY	379	75	202	108	303	67	140	92
80 UNIVERSITY OF DELAWARE	373	224	248	137	300	158	199	114
TOTAL, 1ST 80 INSTS.	177,446	160,324	106,645	91,501	127,809	118,924	71,372	64,986
81 UNIVERSITY OF VIRGINIA	369	411	383	365E	365	411	333	319E
82 UNIVERSITY OF IOWA	369	436	537	561	369	418	491	533
83 NORTHWESTERN UNIVERSITY	361	367	339	598	349	346	319	594
84 VA POLYTECH INST & ST U	344	537	530E	461	295	272	244E	230
85 UNIV OF WEST FLORIDA	333	239	-	15	84	11	-	0
86 UNIV OF CAL RIVERSIDE	297	259	224	215	81	73	67	89
87 UNIV OF SOUTHERN CAL	245	227	156	86	204	190	136	86
88 UNIV OF NEBRASKA-LINCOLN	244	274	318	226	44	48	75	34
89 SOUTHERN METHODIST UNIV	241	171	183	157	189	155	136	147
90 COLLEGE OF WILLIAM & MARY	239I	239	130I	157	227I	227	130I	157
TOTAL, 1ST 90 INSTS.	180,488	163,484	109,445	94,342	130,016	121,075	73,353	67,175
91 BRANDEIS UNIVERSITY	231	209	218	144	231	208	218	143
92 UNIVERSITY OF KENTUCKY	226	177	124I	55I	203	159	124I	55I
93 UNIVERSITY OF KANSAS	223I	160I	143I	184	205I	118I	135I	153
94 UNIV OF SOUTH CAROLINA	219	211	21	2	61E	59	21	2
95 ATLANTA UNIVERSITY	214	10	0	0	197	0	0	0
96 NEW MEXICO STATE UNIV	211	1,142	3,900I	3,226	152	1,118	3,836I	3,214
97 CLARKSON COLLEGE OF TECH	210	152	123	172	181	135	113	156
98 KANS ST U - AG & APP SCI	204	210	733	333	161	162	520	277
99 CUNY QUEENS COLLEGE	195	278I	-	218	129	251I	-	203
100 UNIV OF TEXAS AT DALLAS	188	120	85	-	97	79	61	-
TOTAL, 1ST 100 INSTS.	182,609	166,151	114,773	98,676	131,633	123,364	78,492	71,376
TOTAL, ALL OTHER INSTS.	9,331	9,861	11,405	9,192	6,364	6,298	5,952	6,802

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 3-32. -- R&D EXPENDITURES IN MATHEMATICS AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	78,408	78,424	58,756	52,305	61,080	60,470	44,130	40,632
1 JOHNS HOPKINS UNIVERSITY	12,414	11,869E	146	142	12,39[illegible]	11,692E	143	139
2 NEW YORK UNIVERSITY	3,777	3,788	4,093	3,418	3,646	3,517	3,658	3,344
3 UNIV OF WIS-MADISON	3,768	3,582	3,179	2,789	2,756	2,664	2,570	2,193
4 STANFORD UNIVERSITY	3,081	2,697	2,238E	1,085	2,567	2,155	1,913	959
5 UNIV OF TEX CANCER CENTER	2,119	1,984	1,772	1,677	1,556	1,352	1,151	1,237
6 BOSTON COLLEGE	1,863	1,473	2	938	1,743	1,390	0	929
7 UNIV OF CAL BERKELEY	1,662	1,292	1,333	1,243	1,582	1,222	1,220	1,092
8 UNIVERSITY OF DAYTON	1,626	883E	440	351	1,507	770	385	310
9 PRINCETON UNIVERSITY	1,554	1,389	988	986	1,089	1,142	824	808
10 BROWN UNIVERSITY	1,300	1,214	1,442	1,316	1,300	1,181	1,359	1,224
TOTAL, 1ST 10 INSTS.	33,164	30,151	15,633	13,945	30,144	27,085	13,133	12,234
11 ST JOHN'S UNIVERSITY (NY)	1,291	1,212	1,092	903	0	0	0	0
12 IONA ST U OF SCI & TECH	1,265	2,140	1,759	1,818	435	530	438	567
13 UNIVERSITY OF MINNESOTA	1,242	1,207	1,117	857	777	795	723	511
14 UNIVERSITY OF PITTSBURGH	1,184	1,113	861	612	587	500	453	439
15 MASS INST OF TECHNOLOGY	1,163	1,289	1,251	875	1,162	1,280	1,197	867
16 RUTGERS THE ST UNIV OF NJ	1,129	1,050	808	719	811	732	539	494
17 GEORGE WASHINGTON UNIV	1,124	1,209	1,804	756	757	850	1,401	494
18 UNIVERSITY OF CHICAGO	1,103E	1,119E	1,162E	932	1,002	995	1,335	903
19 UNIV OF ILL URBANA	1,026	773	737	587	887	635	591	545
20 LOUISIANA STATE UNIV	958	709	539	387	99	95	58	91
TOTAL, 1ST 20 INSTS.	44,649	41,972	26,763	22,391	36,661	33,497	19,588	17,145
21 UNIV OF PENNSYLVANIA	936	480	477	482	769	387	357	361
22 HARVARD UNIVERSITY	931E	789E	615E	635	705	598	575	594
23 FLORIDA STATE UNIVERSITY	849	702	580I	571	420	276	324I	304E
24 N C STATE UNIV AT RALEIGH	772	637	453	570	264	203	22	32
25 UNIV OF ILL CHICAGO CIR	769	883	375E	295	420	472	353	294
26 WASHINGTON UNIVERSITY	714	210	135	99	688	180	120	99
27 LOMA LINDA UNIVERSITY	685E	752I	599I	562	553I	643I	359I	399
28 CARNEGIE-MELLON UNIV	660	664	645	582	636	639	579	558
29 ROCKEFELLER UNIVERSITY	651	643	587	534	107	89	75	82
30 SUNY AT STONY BROOK	644	725	576	401	459	518	451	350
TOTAL, 1ST 30 INSTS.	52,260	49,457	31,805	27,122	41,682	37,502	22,933	20,218
31 UNIVERSITY OF MICHIGAN	639	844	585	590	579	665	549	351
32 NORTHERN ILLINOIS UNIV	611	484	162	261	180	90	159	171
33 UNIVERSITY OF GEORGIA	575	607	547	387	105	139	131	63
34 UNIV OF CAL LOS ANGELES	574	472	458	473	552	444	445	427
35 YALE UNIVERSITY	569	558	469	479	533	550	456	462
36 OHIO STATE UNIVERSITY	566	662	767	448	429	458	435	279
37 RENSSELAER POLYTECH INST	563	355	351	360	349	249	257	269
38 OREGON STATE UNIVERSITY	557	345	420	260	168	101	144	61
39 UNIV OF TEXAS AT AUSTIN	551	390	592	327	461	325	536	211
40 TEXAS A & M UNIVERSITY	546	372	351	297	480	333	321	240
TOTAL, 1ST 40 INSTS.	58,011	53,546	36,507	30,769	45,518	40,856	26,235	22,593
41 CORNELL UNIVERSITY	533	528	59[illegible]	515	533	522	572	507
42 COLUMBIA UNIV MAIN DIV	532	470	499	151	508	455	477	137
43 GEORGIA INSTITUTE OF TECH	512	596	332	184	297	352	135	94
44 LEHIGH UNIVERSITY	503	529	342	309	249	357	280	239
45 UNIVERSITY OF WASHINGTON	493	808	938	627	481	771	933	612
46 INDIANA UNIV	455	444	347	268	301	335	275	260
47 UNIV OF CAL SANTA CRUZ	450	355	128	108	407	322	117	99
48 MICHIGAN STATE UNIVERSITY	429	298	276	264	374	173	176	167
49 UNIV OF MD COLLEGE PARK	420	382	256	154	380	362	240	141
50 UNIVERSITY OF ARIZONA	406	294	215	164	232	145	76	137
TOTAL, 1ST 50 INSTS.	62,744	58,250	40,435	33,513	49,280	44,650	29,534	24,970

SEE FOOTNOTES AT END OF TABLE.

TABLE B-32. -- R&D EXPENDITURES IN MATHEMATICS AT UNIVERSITIES AND COLLEGES1 FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 UNIVERSITY OF UTAH	393	353	195	259	368	5	194	234
52 PENNSYLVANIA STATE UNIV	390	254	232	171	209	184	137	155
53 UNIV OF CAL SAN DIEGO	389	424	330	310	382	415	321	304
54 COLORADO STATE UNIVERSITY	380	524	373	374	213	316	190	208
55 NORTHWESTERN UNIVERSITY	361	367	339	341	349	346	319	337
56 UNIV OF NC AT CHAPEL HILL	354	4,356	4,163	3,659	354	4,263	3,959	3,467
57 UNIV OF CAL SANTA BARBARA	350	352E	264E	194	288	317E	218E	151
58 UNIVERSITY OF DELAWARE	342	186	165	99	285	131	137	92
59 US NAVAL POSTGRAD SCHOOL	342	192	125	377	342	192	131	377
60 PURDUE UNIVERSITY	336	167	129	736	311	143	113	642
TOTAL, 1ST 60 INSTS.	56,381	65,425	46,750	40,031	52,381	50,962	35,333	30,927
61 UNIV OF ARK PINE BLUFF	324	245	-	234	0	0	-	0
62 SYRACUSE UNIVERSITY	319	74	165	45	81	67	67	45
63 UNIV OF CAL RIVERSIDE	297	259	224	204	81	73	57	78
64 UNIVERSITY OF ROCHESTER	272	194	212	216	237	169	134	188
65 CALIFORNIA INST OF TECH	236	212	215	281	213	186	191	259
66 UNIVERSITY OF CONNECTICUT	232	138	263	149	139	81	151	55
67 BRANDEIS UNIVERSITY	231	209	218	144	231	208	218	143
68 COLLEGE OF WILLIAM & MARY	230I	230	211	261	218I	218	211	261
69 RICE UNIVERSITY	223	273I	242	219	220	273I	242	219
70 UNIVERSITY OF KENTUCKY	223	175	79I	351	201	157	79I	351
TOTAL, 1ST 70 INSTS.	68,969	67,434	48,389	41,584	54,001	52,394	36,523	31,975
71 UNIV OF SOUTH CAROLINA	219E	211E	21	2	61E	59E	21	2
72 SUNY AT BUFFALO	210	356	744	1,619	159	277	587	1,601
73 CLARKSON COLLEGE OF TECH	210	152	123	172	181	135	113	154
74 CLEMSON UNIVERSITY	182	162	155	80	163	41	32	15
75 TULANE UNIVERSITY	182	172	166	171	117E	146I	140	144
76 UNIVERSITY OF COLORADO	182	272	206	225	170	243	171	188
77 UNIVERSITY OF FLORIDA	182E	157	287	433	89E	99	95	67
78 UNIVERSITY OF VIRGINIA	181	148	153	160E	179	148	153	140E
79 WAYNE STATE UNIVERSITY	164	141	223	75	122	104	189	66
80 UNIVERSITY OF DENVER	162	171	123	256	137	151	135	182
TOTAL, 1ST 80 INSTS.	70,842	69,376	50,571	44,777	55,359	53,796	38,110	34,534
81 UNIVERSITY OF KANSAS	154I	109I	98I	130	147I	85I	76I	112
82 TEXAS TECH UNIVERSITY	157	122	109	49	129	81	76	46
83 HARVEY MUDD COLLEGE	149	81	-	6	116	71	-	5
84 VA POLYTECH INST & ST U	142	490	451E	392	114	236	197E	176
85 UNIV OF SOUTHERN CAL	141	227	156	86	111	190	136	86
86 UNIV OF WEST FLORIDA	140	43	-	0	84	11	-	0
87 DUKE UNIVERSITY	138	114	67	37	136	114	66	37
88 UNIV OF SOUTH FLORIDA	127	103	143	157	123	97	129	133
89 NORTHEASTERN UNIVERSITY	126I	114	122	85	74I	66	58	42
90 UNIV OF MASS AT AMHERST	124	158	119	101	98	120	98	80
TOTAL, 1ST 90 INSTS.	72,244	70,864	51,836	45,820	56,491	54,803	38,946	35,251
91 U OF HOUSTON CENTRAL CAM	124	216	181I	159	20	128	151I	142
92 UNIVERSITY OF IOWA	119	81	163	237	115	78	150	224
93 CUNY QUEENS COLLEGE	119	98I	-	76	113	83I	-	67
94 UNIVERSITY OF NOTRE DAME	118	154	67	118	112	146	159	112
95 CUNY GRAD SCH & UNIV CTR	114	199	169I	166	99	181	152I	149
96 SOUTHERN METHODIST UNIV	114	94	108	94	100	85	97	85
97 SUNY AT ALBANY	112E	152E	86E	59	103	140	77	57
98 UNIVERSITY OF NEW MEXICO	112	110	90	66	90	46	49	51
99 SUNY COLLEGE NEW PALTZ	109I	92I	-	79I	0I	0I	-	0I
100 UNIVERSITY OF OREGON MAIN	106	125	90	106	105	103	81	80
TOTAL, 1ST 100 INSTS.	73,389	72,185	52,890	46,980	57,351	55,793	39,972	36,218
TOTAL, ALL OTHER INSTS.	5,019	6,239	5,866	5,325	3,729	4,677	4,258	4,414

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-33. -- R&D EXPENDITURES IN THE COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	113,532	97,588	67,422	55,563	76,917	69,192	41,214	37,545
1 JOHNS HOPKINS UNIVERSITY	29,604	28,281E	72	41	29,390	27,891E	65	40
2 MASS INST OF TECHNOLOGY	7,846	6,646	6,448	7,927	6,038	5,775	5,529	6,275
3 CARNEGIE-MELLON UNIV	5,263	3,649	2,914	2,433	4,270	3,169	2,959	2,399
4 UNIV OF MD COLLEGE PARK	4,696	3,942	4,011	3,705	1,425	1,257	1,140	1,340
5 UNIV OF ILL URBANA	4,358	3,357	8,098	4,313	1,532	1,078	2,355	3,770
6 PENNSYLVANIA STATE UNIV	4,085	3,707	3,653	3,254	235	181	236	152
7 STANFORD UNIVERSITY	4,032	5,008	4,456E	2,534	3,839	4,749	4,136	2,493
8 GEORGIA INSTITUTE OF TECH	3,776	4,056	3,039	529	2,188	2,392	1,593	269
9 WASHINGTON UNIVERSITY	3,336	0	0	0	3,125	0	0	0
10 UNIV OF PENNSYLVANIA	2,529	1,586	2,006	1,229	1,620	1,331	1,333	1,074
TOTAL, 1ST 10 INSTS.	69,523	60,232	34,697	25,965	53,662	47,823	19,176	17,812
11 UNIV OF TEXAS AT AUSTIN	2,445	1,380	772	572	963	1,191	559	469
12 FLORIDA STATE UNIVERSITY	2,398	1,335	1,141I	1,182	0	43	561	61E
13 CALIFORNIA INST OF TECH	1,906	871	811	348	1,311	434	290	319
14 RUTGERS THE ST UNIV OF NJ	1,885	1,063	698	711	714	728	503	577
15 YALE UNIVERSITY	1,447	1,672	694	397	1,334	1,396	569	395
16 NEW YORK INST TECHNOLOGY	1,264	1,660	-	279	0	0	-	0
17 NEW YORK UNIVERSITY	1,227	1,192	744	691	1,132	1,107	571	678
18 PURDUE UNIVERSITY	1,140	1,000	784	253	1,011	871	555	215
19 UNIVERSITY OF MICHIGAN	1,033	1,710	1,011	1,267	194	457	227	314
20 CORNELL UNIVERSITY	1,010	987	243	579	818	657	214	518
TOTAL, 1ST 20 INSTS.	95,278	73,082	41,595	32,244	61,139	54,707	23,140	21,357
21 GALLAUDET COLLEGE	9321	7101	-	577	0	01	-	0
22 UNIV OF TEX CANCER CENTER	927	1,061	580	874	111	351	72	301
23 UNIVERSITY OF UTAH	920	606	689	845	596	429	519	521
24 IOWA ST U OF SCI & TECH	910	0	0	0	97	0	0	0
25 HARVARD UNIVERSITY	889E	733E	490E	177	673	555	452	161
26 UNIV OF WIS-MADISON	842	672	373	304	492	457	255	198
27 SYRACUSE UNIVERSITY	806	918E	511	446	768	662	456	386
28 UNIVERSITY OF GEORGIA	772	746	536	413	617	484	297	314
29 UNIV OF OKLA HLTH SCI CTR	768	0	0	-	0	0	0	-
30 ST JOHN'S UNIVERSITY (NY)	712	633	489	386	0	0	0	0
TOTAL, 1ST 30 INSTS.	93,756	79,161	45,263	36,266	64,493	57,645	25,301	23,238
31 OHIO STATE UNIVERSITY	684	567	420	424	391	249	219	257
32 ILLINOIS INST OF TECH	649I	575E	55	105	551I	486E	55	105
33 UNIVERSITY OF PITTSBURGH	605	839	497	884	124	393	330	463
34 UNIVERSITY OF ROCHESTER	603	365	414	288	485	273	242	134
35 BROWN UNIVERSITY	600	417	2	0	570	388	0	0
36 SUNY AT BUFFALO	565	556	562	218	303	327	360	194
37 UNIVERSITY OF DAYTON	552	425E	575	458	511	370	533	405
38 UNIV OF MASS AT AMHERST	536	790	517	577	406	691	406	328
39 UNIVERSITY OF COLORADO	509	742	628	864	312	407	340	296
40 ROCKEFELLER UNIVERSITY	509	470	461	0	109	125	111	0
TOTAL, 1ST 40 INSTS.	99,563	84,907	49,394	40,081	68,255	61,354	27,356	25,410
41 UNIVERSITY OF CONNECTICUT	493	435	347	182	295	254	199	69
42 DENISON UNIVERSITY	478E	409	-	0	196E	168	-	0
43 GEORGE WASHINGTON UNIV	430	345	1,793	2,894	424	336	1,757	2,894
44 UNIV OF P R-RIO PIEDRAS	428I	373I	332	6	235I	203I	191	0
45 N J INST OF TECHNOLOGY	424	681	413	429	424	681	413	429
46 UNIVERSITY OF NEW ORLEANS	417	429	307	39	0	0	0	0
47 UNIVERSITY OF WASHINGTON	407	473	286	152	388	471	290	100
48 UNIVERSITY OF ARIZONA	396	323	48	47	317	198	46	41
49 UNIV OF NC AT CHAPEL HILL	390	461	292	155	357	413	261	154
50 WAYNE STATE UNIVERSITY	363	42	0	0	53	27	0	0
TOTAL, 1ST 50 INSTS.	103,789	88,878	53,212	43,985	70,944	64,105	31,513	29,097

SEE FOOTNOTES AT END OF TABLE.

TABLE B-33. -- R&D EXPENDITURES IN THE COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 US NAVAL POSTGRAD SCHOOL	357	469	551	662	357	469	438	662
52 PRINCETON UNIVERSITY	348	422	371	300	286	367	319	300
53 UNIV OF CAL SAN DIEGO	316	376	101	0	48	51	23	0
54 UNIV OF CAL SANTA BARBARA	310E	305	139E	33	193E	212	57E	5
55 DREXEL UNIVERSITY	293	C	0	0	232	0	0	0
56 DUKE UNIVERSITY	270	218	235	283	221	217	233	281
57 COLORADO STATE UNIVERSITY	269	153	137	169	234	106	98	133
58 UNIVERSITY OF FLORIDA	267E	230	119	37	150E	166	139	0
59 N C STATE UNIV AT RALEIGH	265	40	24	63	151	7	15	23
60 SUNY AT STONY BROOK	256	312	210	214	182	222	155	136
TOTAL, 1ST 60 INSTS.	106,740	91,403	55,099	45,746	72,998	65,922	32,530	30,637
61 UNIVERSITY OF IOWA	251	355	374	324	251	340	341	309
62 MICHIGAN STATE UNIVERSITY	249	295	23	947	117	0	10	8
63 OREGON STATE UNIVERSITY	219	161	227	130	62	55	56	33
64 RICE UNIVERSITY	214	0	0	1	143	0	0	1
65 VA POLYTECH INST & ST U	202	47	79E	69	181	36	57E	54
66 LEHIGH UNIVERSITY	194	95	89	56	119	0	0	0
67 UNIV OF WEST FLORIDA	193	196	-	15	0	0	-	0
68 UNIV OF NEBRASKA-LINCOLN	192	223	210	204	21	16	18	15
69 UNIVERSITY OF VIRGINIA	188	263	230	205E	186	263	230	179E
70 UNIV OF ARK PINE BLUFF	186	164	-	116	0	0	-	0
TOTAL, 1ST 70 INSTS.	108,828	93,202	56,331	47,813	74,078	66,632	33,242	31,235
71 KANS ST U - AG & APP SCI	156	153	647	234	130	122	538	180
72 UNIVERSITY OF MINNESOTA	156	126	64	57	125	119	59	54
73 NEW MEXICO STATE UNIV	155	93	2,919I	2,415	96	69	2,907I	2,405
74 TEXAS WOMAN'S UNIVERSITY	155	52	0	0	73	52	0	0
75 UNIV OF CAL SANTA CRUZ	150	118	43	36	136	107	39	33
76 INDIANA UNIV	136	67	59	48	107	49	43	48
77 SUNY AT BINGHAMTON	136	28	33	134	111	27	0	51
78 ATLANTA UNIVERSITY	129	10	0	0	129	0	0	0
79 CUNY BERNARD BARUCH COL	127I	110I	-	29	0I	0I	-	0
80 SOUTHERN METHODIST UNIV	127	77	75	63	89	70	39	62
TOTAL, 1ST 80 INSTS.	110,254	94,036	60,171	50,829	75,073	67,247	36,357	34,069
81 INSTITUTE OF TEXTILE TECH	114I	105I	94I	80	0I	0I	0	0
82 UNIV OF SOUTHERN CAL	104	0	0	0	93	0	0	0
83 UNIV OF MISSOURI ROLLA	101	60	72	62	84	51	51	48
84 REED COLLEGE	99	80	-	0	99	80	-	0
85 LOMA LINDA UNIVERSITY	96E	73I	82I	69	40I	47I	27I	30
86 WRIGHT STATE UNIVERSITY	94	193	69	37	74	27	42	34
87 UNIV OF CAL LOS ANGELES	86	126	46	183	76	126	46	183
88 UNIV OF TEXAS AT DALLAS	82	35	51	-	58	32	38	-
89 UNIV OF MAINE ORONO	82	0	0	0	0	0	0	0
90 UNIV ALABAMA HUNTSVILLE	81	99	13	80	60	24	11	39
TOTAL, 1ST 90 INSTS.	111,195	94,807	60,598	51,340	75,657	67,634	37,092	34,403
91 WASHINGTON STATE UNIV	81	42	18	29	70	35	13	29
92 WELLESLEY COLLEGE	79	14E	-	4	10	29	-	4
93 UNIV OF CAL IRVINE	78	98E	153	144	76	95E	150	144
94 CUNY QUEENS COLLEGE	77	178I	-	142	16	168I	-	136
95 LOUISIANA STATE UNIV	71	50	42	37	0	0	0	0
96 UNIVERSITY OF MIAMI	71	0	0	22E	42	0	0	0
97 US AIR FORCE ACADEMY	70	53	-	84	70	53	-	84
98 INSTITUTE PAPER CHEMISTRY	69E	66	68	41	7E	7	7	7
99 COLUMBIA UNIV MAIN DIV	66	0	0	279	65	0	0	273
100 UNIVERSITY OF KANSAS	65I	51I	45I	54	59I	33I	29I	41
TOTAL, 1ST 100 INSTS.	111,922	95,493	60,924	52,166	76,071	68,054	37,291	35,121
TOTAL, ALL OTHER INSTS.	1,610	2,095	6,498	3,397	846	1,138	3,923	2,425

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-34. -- R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES1 FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	LIFE SCIENCES TOTAL				AGRI-CULTURAL SCIENCES	BIO-LOGICAL SCIENCES	MEDICAL SCIENCES	OTHER
	1980	1979	1978	1977				
TOTAL, ALL INSTITUTIONS	3,210,687	2,928,282	2,536,465	2,258,803	648,591	1,082,578	1,379,172	100,346
1 UNIVERSITY OF MINNESOTA	90,672	79,201	71,129	61,659	26,796	16,572	47,238	96
2 UNIV OF WIS-MADISON	70,707	64,280	56,875	53,775	11,772	21,725	36,987	323
3 UNIVERSITY OF WASHINGTON	70,582	61,811	56,385	47,619	8,209	15,847	44,478	2,049
4 UNIV OF CAL SAN FRANCISCO	70,400	58,693	54,482	48,324	0	14,188	53,184	3,028
5 JOHNS HOPKINS UNIVERSITY	70,077	65,317E	55,149	52,538	0	26,834	41,092	2,151
6 HARVARD UNIVERSITY	66,599E	59,529E	52,607E	47,030	0	39,566E	27,033E	0
7 CORNELL UNIVERSITY	52,421	54,014	48,668	43,642	18,420	17,334	26,557	3
8 UNIV OF PENNSYLVANIA	58,766	51,389	49,508	46,612	0	28,620	28,815	1,331
9 UNIV OF CAL DAVIS	58,287	47,846	42,829	39,391	24,929	21,413	9,278	3,667
10 COLUMBIA UNIV MAIN DIV	58,219	47,000	40,994	39,463	0	12,908	45,311	0
TOTAL, 1ST 10 INSTS.	676,730	588,880	528,622	480,053	90,126	215,007	358,953	12,644
11 YALE UNIVERSITY	53,859	47,207	39,613	35,605	406	21,201	32,252	0
12 UNIV OF CAL LOS ANGELES	51,424	43,127	40,763	40,956	0	17,182	32,434	1,809
13 UNIVERSITY OF MICHIGAN	50,661	42,915	38,750	33,754	0	18,301	32,350	0
14 MICHIGAN STATE UNIVERSITY	50,566	41,697	40,299	31,995	26,922	13,653	9,367	624
15 WASHINGTON UNIVERSITY	47,803	43,941	38,623	30,656	0	16,586	28,711	2,506
16 STANFORD UNIVERSITY	46,776	43,598	37,749E	32,414	0	2,858	43,753	165
17 NEW YORK UNIVERSITY	42,881	41,114	41,463	35,519	0	10,536	25,883	6,462
18 YESHIVA UNIVERSITY	42,272	34,657	31,380E	25,212I	0	11,202	21,854	9,216
19 UNIVERSITY OF GEORGIA	41,341	37,174	33,642	24,006	28,068	9,986	3,237	0
20 UNIV OF CAL SAN DIEGO	39,681	33,465	29,396	26,828	0	9,364	30,226	91
TOTAL, 1ST 20 INSTS.	1,143,994	997,775	900,300	796,998	145,522	345,876	619,090	33,516
21 OHIO STATE UNIVERSITY	38,999	33,054	29,423	26,297	14,415	11,724	10,103	2,756
22 UNIVERSITY OF ROCHESTER	38,917	34,072	30,577	29,891	0	17,170	18,918	2,929
23 TEXAS A & M UNIVERSITY	38,119	31,980	29,367	27,419	31,980	2,459	3,235	444
24 BAYLOR COL OF MEDICINE	37,908	33,676	27,431	23,355	0	15,110	22,798	0
25 UNIVERSITY OF CHICAGO	37,570E	38,803E	38,751E	41,502	0	18,442E	19,128E	0
26 UNIV OF SOUTHERN CAL	35,939	32,756	30,521	19,627	0	1,473	34,455	0
27 UNIV OF CAL BERKELEY	35,686	31,746	31,143	30,283	6,487	21,908	7,291	0
28 UNIVERSITY OF COLORADO	34,530	26,245E	23,556	20,100	0	7,595	25,492	1,443
29 LOUISIANA STATE UNIV	34,525	29,852	26,283	19,481	22,643	6,568	5,308	6
30 UNIVERSITY OF FLORIDA	32,869E	28,340	28,279	30,791	14,933E	4,043E	13,723E	169E
TOTAL, 1ST 30 INSTS.	1,509,653	1,317,299	1,196,631	1,065,744	235,980	492,368	779,442	41,263
31 DUKE UNIVERSITY	31,395	30,749	27,853	24,250	275	13,332	15,698	2,090
32 UNIV ALABAMA BIRMINGHAM	30,624	26,719	22,593	18,907	0	6,326	23,821	477
33 UNIVERSITY OF CONNECTICUT	30,450	26,095	22,020	19,910	44	16,405	13,736	265
34 UNIV OF TEX CANCER CENTER	30,202	30,102	25,213	23,994	0	7,182	20,852	2,158
35 ROCKEFELLER UNIVERSITY	30,163	27,851	24,756	24,955	0	29,383	780	0
36 UNIVERSITY OF ARIZONA	29,390	25,031	17,230	14,617	7,737	9,418	10,771	1,464
37 PURDUE UNIVERSITY	28,716	25,462	22,785	21,489	12,722	12,036	3,958	0
38 N C STATE UNIV AT RALEIGH	28,519	26,964	24,958	21,878	21,150	7,051	318	0
39 UNIVERSITY OF IOWA	28,385	23,263	20,910	18,413	0	8,366	18,854	1,165
40 UNIV OF NC AT CHAPEL HILL	27,897	19,423	16,583	17,018	0	13,919	13,978	0
TOTAL, 1ST 40 INSTS.	1,936,794	1,678,998	1,421,532	1,271,175	277,908	575,786	902,219	48,882
41 UNIV OF MISSOURI COLUMBIA	27,879	26,515	24,314	21,622	11,991	6,194	9,694	0
42 OREGON STATE UNIVERSITY	27,149	23,182	19,673	17,708	17,685	7,837	1,471	155
43 IOWA ST U OF SCI & TECH	26,993	24,038	21,869	18,235	17,103	6,635	2,970	375
44 UNIVERSITY OF MIAMI	26,707	25,513	25,299	21,674	0	6,073	18,888	1,746
45 CUNY MT SINAI SCH OF MED	26,696	23,085	23,380	19,308	0	6,236	20,460	0
46 U TEX HLTH SCI CTR DALLAS	26,507	22,576	19,704	16,755	0	10,264	16,303	0
47 PENNSYLVANIA STATE UNIV	25,249	23,693	22,033	19,805	12,083	8,742	5,117	333
48 UNIV OF ILL URBANA	26,237	22,767	20,539	15,106	15,994	7,184	2,019	1,040
49 CASE WESTERN RESERVE UNIV	26,164	22,770	17,402	16,022	0	8,570	17,594	0
50 NORTHWESTERN UNIVERSITY	25,584	20,364	16,717	14,389	0	7,434	16,018	2,132
TOTAL, 1ST 50 INSTS.	2,071,004	1,814,501	1,630,463	1,451,799	352,764	650,955	1,012,652	54,633

SEE FOOTNOTES AT END OF TABLE.

TABLE B-34. -- R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	LIFE SCIENCES TOTAL				AGRICULTURAL SCIENCES	BIOLOGICAL SCIENCES	MEDICAL SCIENCES	OTHER
	1980	1979	1978	1977				
51 UNIVERSITY OF CINCINNATI	24,737	20,647	21,264	19,280	0	11,639	13,398	0
52 WASHINGTON STATE UNIV	23,663	19,107	15,844	13,700	20,681	1,207	1,775	0
53 MISSISSIPPI STATE UNIV	22,935	20,218	17,358	15,484	20,587	2,010	338	0
54 UNIVERSITY OF KENTUCKY	22,311	23,253	14,423I	11,810I	15,296	662	6,355	0
55 MASS INST OF TECHNOLOGY	20,651	18,672	16,556	15,021	0	19,033	1,618	0
56 UNIVERSITY OF UTAH	20,396	19,853	17,565	13,130	0	8,764	11,632	0
57 COLORADO STATE UNIVERSITY	20,326	22,112	19,368	17,361	9,108	8,902	2,315	1
58 BOSTON UNIVERSITY	20,250	17,405	16,478	15,760	0	1,333	18,917	0
59 UNIV OF CAL RIVERSIDE	19,733	16,734	15,561	13,960	11,292	8,410	31	0
60 UNIV OF NEBRASKA-LINCOLN	19,536	17,49[illegible]	[illegible]7,220	15,09[illegible]	16,360	1,[illegible]00	1,73[illegible]	[illegible]
TOTAL, 1ST 60 INSTS.	2,265,542	2,007,497	1,800,060	1,602,330	446,086	714,295	1,073,527	54,634
61 VIRGINIA COMMONWLTH UNIV	17,710	14,638	11,720	11,763	0	7,398	10,279	33
62 UNIVERSITY OF PITTSBURGH	17,583	16,597	16,962	13,599	0	7,063	6,229	4,291
63 VA POLYTECH INST & ST U	17,437	15,715	15,430E	13,436	15,255	1,552	530	0
64 VANDERBILT UNIVERSITY	17,245	15,182	14,222	16,214	0	9,207	3,766	4,277
65 AUBURN UNIVERSITY	16,636	16,449	13,431	12,248	16,329	0	307	0
66 U TEX MED BRNCH GALVESTON	16,041	13,835	11,899	11,858	0	5,623	5,981	4,437
67 INDIANA UNIV	16,039	14,468	13,651	10,772	0	5,877	10,152	0
68 KANS ST U - AG & APP SCI	16,001	14,119	12,978	13,238	12,111	3,054	836	0
69 UNIV OF CAL IRVINE	15,990	12,069	10,586	9,566	0	8,312	7,678	0
70 INST OF AGRI UNIV OF TENN	15,711I	13,750I	12,221	8,204	15,711I	0	0	0
TOTAL, 1ST 70 INSTS.	2,651,935	2,154,719	1,932,940	1,723,227	505,492	762,376	1,116,395	67,672
71 UNIV OF HAWAII-MANOA	15,539	14,047	12,795	11,395	4,681	4,702	954	5,192
72 SUNY AT BUFFALO	15,511	15,264	13,482	12,335	0	1,548	13,963	0
73 UNIV OF MD BALT PROF SCH	15,019	11,998	10,981	11,40C	0	7,422	7,411	186
74 UNIVERSITY OF VIRGINIA	14,869	13,074	11,490	10,050E	0	6,335	8,534	0
75 TEMPLE UNIVERSITY	14,839E	13,745E	14,410	13,831	0	7,282E	7,557E	0
76 EMORY UNIVERSITY	14,677	13,59C	12,562	12,125	0	3,131	8,346	3,195
77 UNIV OF ILL MED CTR CHGO	14,644	11,929	10,399	8,529	0	5,791	7,593	1,260
78 UNIV OF VT & ST AGRIC COL	14,067	12,363	12,431	11,741	2,449	5,063	5,931	615
79 U TEX HLTH SCI CTR S ANTO	13,972	11,53[illegible]	9,359	6,436	0	6,964	7,008	0
80 RUTGERS THE ST UNIV OF NJ	13,785	14,47E	13,508	12,530	6,812	6,966	3	4
TOTAL, 1ST 80 INSTS.	2,593,847	2,286,74C	2,054,857	1,833,605	519,465	817,580	1,183,675	78,127
81 WAYNE STATE UNIVERSITY	13,387	13,189	12,249	6,324	0	7,164	5,239	929
82 OKLAHOMA STATE UNIVERSITY	13,342I	17,543I	10,899I	10,371	8,092I	3,264I	1,985I	0
83 UNIV OREGON HLTH SCI CTR	12,793	10,320E	10,099I	8,858	0	3,644	9,139	0
84 UNIVERSITY OF NEW MEXICO	12,639	14,71C	9,452	5,712	0	3,586	9,052	0
85 COL OF MED & DENT OF N J	12,394	9,897	8,121	3,664	0	5,572	6,822	0
86 NORTH DAKOTA STATE UNIV	12,277	9,923	9,153	8,453	5,092	7,185	0	0
87 CLEMSON UNIVERSITY	12,030	11,064	9,157	9,799	8,651	3,379	0	0
88 UNIV OF P R-MAYAGUEZ	11,793	10,840	10,469E	9,997E	11,330	303	0	160
89 SUNY AT STONY BROOK	11,704	9,879	9,069	6,567	0	6,841	3,675	1,189
90 ALBANY MEDICAL COLLEGE	11,420	10,221	8,368	8,148	0	3,426	7,994	0
TOTAL, 1ST 90 INSTS.	2,722,580	2,399,326	2,151,893	1,911,498	552,630	861,944	1,227,632	80,404
91 TULANE UNIVERSITY	10,895	10,305	9,908	10,217	0	3,901	4,536	2,458
92 U TEX HLTH SCI CTR HOUSTN	10,888	7,589	6,517	7,268	0	5,638	4,310	440
93 UNIV OF MD COLLEGE PARK	10,871	8,922	8,201	7,818	9,075	1,597	0	199
94 SUNY DOWNSTATE MED CTR	10,799	10,357	10,185	10,393	0	3,856	6,943	0
95 MEDICAL COLLEGE OF WIS	10,655	8,482	7,455	5,817	0	2,480	8,175	0
96 GEORGETOWN UNIVERSITY	10,615	10,705	8,005	7,913	0	4,333	5,204	1,079
97 GEORGE WASHINGTON UNIV	10,320	10,826	7,738	6,842	0	1,189	9,378	153
98 UNIVERSITY OF IDAHO	10,214	8,771	7,934	9,811	8,191	1,791	212	20
99 TUFTS UNIVERSITY	10,068	7,620I	7,189I	6,419	0	4,843	5,225	0
100 UTAH STATE UNIVERSITY	9,716	6,830	6,116E	6,109	5,855E	3,861	0	0
TOTAL, 1ST 100 INSTS.	2,827,627	2,499,[illegible]	[illegible],231,141	1,990,[illegible]05	[illegible]78,751	895,633	1,271,593	84,752
TOTAL, ALL OTHER INSTS.	383,066	338,549	305,324	268,798	72,840	187,145	107,437	15,594

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE A-35. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	LIFE SCIENCES TOTAL				AGRICULTURAL SCIENCES	BIOLOGICAL SCIENCES	MEDICAL SCIENCES	OTHER
	1980	1979	1978	1977				
TOTAL, ALL INSTITUTIONS	2,391,836	1,817,734	1,625,123	1,473,983	197,821	804,331	1,020,809	68,875
1 JOHNS HOPKINS UNIVERSITY	61,481	55,386E	45,852	43,277	0	24,212	35,139	2,130
2 UNIV OF CAL SAN FRANCISCO	58,202	49,663	44,777	39,936	0	12,046	43,271	2,885
3 UNIVERSITY OF WASHINGTON	57,659	51,487	46,741	40,149	5,179	14,027	36,733	1,671
4 HARVARD UNIVERSITY	50,412	45,062	41,022	36,673	0	29,950	20,462	0
5 UNIVERSITY OF MINNESOTA	50,061	44,427	39,054	35,357	5,360	10,740	33,857	94
6 YALE UNIVERSITY	48,367	40,845	34,853	31,033	367	19,714	28,286	0
7 COLUMBIA UNIV MAIN DIV	47,418	37,013	31,622	31,520	0	11,321	36,097	0
8 UNIV OF PENNSYLVANIA	44,947	38,213	34,671	31,969	0	22,736	21,409	802
9 UNIV OF WIS-MADISON	44,556	40,385	35,591	34,194	5,406	13,956	25,126	68
10 STANFORD UNIVERSITY	43,328	39,994	34,518	30,885	0	2,590	40,738	0
TOTAL, 1ST 10 INSTS.	506,431	441,475	388,701	354,993	16,311	161,292	321,178	7,650
11 UNIV OF CAL LOS ANGELES	39,552	33,956	32,957	33,277	0	14,832	23,525	1,195
12 WASHINGTON UNIVERSITY	37,797	34,664	30,010	26,106	0	12,514	23,387	1,896
13 UNIV OF CAL SAN DIEGO	35,129	29,740	25,747	24,235	0	8,734	26,346	49
14 UNIVERSITY OF MICHIGAN	34,632	29,104	26,750	22,922	0	13,623	21,009	0
15 CORNELL UNIVERSITY	34,392	29,712	26,663	24,113	4,750	10,508	18,134	0
16 NEW YORK UNIVERSITY	32,756	30,211	30,936	27,888	0	9,406	17,838	5,512
17 UNIVERSITY OF CHICAGO	31,639	28,852	27,999	30,735	0	16,253	15,386	0
18 YESHIVA UNIVERSITY	31,214	29,108	26,784	22,6341	0	8,272	16,137	6,805
19 BAYLOR COL OF MEDICINE	31,211	26,304	21,330	21,063	0	12,651	18,560	0
20 UNIV OF CAL DAVIS	29,344	23,628	21,572	20,334	6,511	14,534	5,469	2,830
TOTAL, 1ST 20 INSTS.	344,057	733,754	659,449	608,300	27,572	282,619	507,959	25,897
21 DUKE UNIVERSITY	29,339	26,478	23,494	21,804	236	12,683	14,570	1,853
22 UNIVERSITY OF ROCHESTER	27,688	23,747	21,484	20,716	0	13,291	12,930	1,467
23 UNIVERSITY OF COLORADO	26,399	19,98[illegible]E	17,436	15,399	0	6,198	18,994	1,207
24 UNIV ALABAMA BIRMINGHAM	25,098	22,389	20,172	16,976	0	5,892	18,738	468
25 UNIVERSITY OF IOWA	24,632	19,298	16,796	15,611	0	7,600	16,172	860
26 UNIV OF NC AT CHAPEL HILL	24,233	16,636	13,674	14,397	0	12,712	11,521	0
27 UNIV OF CAL BERKELEY	23,292	21,441	21,475	21,115	1,915	15,093	6,274E	0
28 MICHIGAN STATE UNIVERSITY	22,299	16,418	15,555	14,160	8,467	9,027	4,558	127
29 UNIV OF SOUTHERN CAL	21,642	23,600	21,722	16,499	0	915	20,727	0
30 CUNY MT SINAI SCH OF MED	21,160	17,841	16,308	16,036	0	5,199	15,961	0
TOTAL, 1ST 30 INSTS.	1,339,819	941,587	847,605	791,013	38,199	371,229	648,524	31,875
31 U TEX HLTH SCI CTR DALLAS	20,892	17,835	15,6731	13,383	0	8,420	12,432	0
32 UNIVERSITY OF MIAMI	19,472	19,07E	17,719	16,651	0	4,902	14,275	295
33 UNIVERSITY OF CONNECTICUT	19,315	16,518	13,988	11,957	23	10,216	9,037	39
34 BOSTON UNIVERSITY	18,909	15,97E	15,409	14,439	0	1,228	17,591	0
35 OHIO STATE UNIVERSITY	18,853	14,825	12,941	12,249	4,081	7,174	5,306	2,292
36 CASE WESTERN RESERVE UNIV	18,483	15,203	11,397	10,826	0	6,310	12,173	0
37 UNIVERSITY OF UTAH	17,946	17,465	15,578	10,939	0	7,931	10,015	0
38 NORTHWESTERN UNIVERSITY	17,383	13,919	11,47[illegible]	10,030	0	6,484	9,533	1,366
39 MASS INST OF TECHNOLOGY	16,170	14,795	13,425	12,387	0	15,464	726	0
40 UNIV OF ILL URBANA	16,128	11,349	9,900	8,347	7,796	6,492	1,134	655
TOTAL, 1ST 40 INSTS.	1,273,330	1,097,548	985,110	902,221	50,090	445,850	740,856	36,524
41 PENNSYLVANIA STATE UNIV	16,016	14,802	13,701	12,725	4,449	7,615	3,681	271
42 ROCKEFELLER UNIVERSITY	15,964	14,173	12,601	11,686	0	15,856	108	0
43 UNIV OF TEX CANCER CENTER	15,851	17,042	14,241	14,215	0	2,797	12,148	906
44 UNIVERSITY OF ARIZONA	15,696	13,547	8,772	6,830	1,706	5,893	7,905	292
45 UNIVERSITY OF FLORIDA	14,750E	16,269	10,930	8,246	7,184E	2,012E	5,449E	105E
46 VIRGINIA COMMONWLTH UNIV	14,381	11,925	9,620	9,455	0	6,107	8,242	32
47 VANDERBILT UNIVERSITY	14,259	12,606	11,722	13,959	0	8,217	2,664	3,378
48 UNIVERSITY OF PITTSBURGH	14,207	13,515	12,309	11,502	0	6,189	4,673	3,340
49 UNIVERSITY OF CINCINNATI	13,705	11,020	8,587	7,942	0	8,039	5,555	0
50 UNIVERSITY OF GEORGIA	13,654	11,517	10,107	7,960	4,873	7,600	1,131	0
TOTAL, 1ST 50 INSTS.	1,421,809	1,233,964	1,097,700	1,006,741	68,302	516,175	792,493	44,849

SEE FOOTNOTES AT END OF TABLE.

TABLE 9-35. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	LIFE SCIENCES TOTAL				AGRI-CULTURAL SCIENCES	BIO-LOGICAL SCIENCES	MEDICAL SCIENCES	OTHER
	1980	1979	1978	1977				
51 PURDUE UNIVERSITY	13,604	11,519	10,428	10,034	3,973	7,492	2,239	0
52 UNIV OF CAL IRVINE	13,516	9,712	8,796	7,704	0	7,522	5,994	0
53 COLORADO STATE UNIVERSITY	13,279	13,576	12,887	11,903	5,023	6,576	1,679	1
54 UNIV OF MD BALT PROF SCH	13,253	10,852	9,814	9,736	0	7,039	6,028	186
55 UNIVERSITY OF VIRGINIA	13,105	11,860	10,388	7,811E	0	5,845	7,260	0
56 TEXAS A & M UNIVERSITY	12,970	10,355	7,391	7,626	9,325	1,891	1,672	82
57 OREGON STATE UNIVERSITY	12,738	10,25C	7,742	7,307	7,645	4,311	634	148
58 EMORY UNIVERSITY	12,657	12,068	11,216	11,081	0	2,982	6,583	3,092
59 TEMPLE UNIVERSITY	11,303	10,635	11,111	10,656	0	6,034	5,259	0
60 INDIANA UNIV	11,237	10,679	9,687	7,893	0	4,775	6,462	0
TOTAL, 1ST 60 INSTS.	1,549,470	1,345,470	1,197,160	1,098,492	94,169	570,642	836,303	48,357
61 UNIVERSITY OF NEW MEXICO	11,032	10,319	6,626	3,692	0	3,073	7,959	0
62 UNIV OF MISSOURI COLUMBIA	10,609	9,495	8,739	7,068	1,687	4,074	4,847	0
63 UNIV OF VT & ST AGRIC COL	10,412	9,988	9,310	8,782	1,033	4,225	5,033	121
64 U TEX MED BRNCH GALVESTON	10,387	8,702	7,618	7,219	0	4,615	4,584	1,188
65 UNIV OF ILL MED CTR CHGO	10,329	8,831	7,461	6,231	0	4,069	5,150	1,100
66 SUNY AT BUFFALO	10,302	10,021	8,371	9,965	0	1,053	9,249	0
67 U TEX HLTH SCI CTR S ANTO	10,158	9,152	6,742	5,147	0	5,459	4,699	0
68 UNIVERSITY OF KENTUCKY	9,499	9,567	8,591I	3,806I	4,327	596	4,576	0
69 IOWA ST U OF SCI & TECH	9,368	9,621	7,400	5,569	5,583	2,826	959	0
70 COL OF MED & DENT OF N J	9,095	6,337	5,765	2,927	0	4,290	4,805	0
TOTAL, 1ST 70 INSTS.	1,650,660	1,434,503	1,273,763	1,158,898	106,799	604,922	888,174	50,766
71 GEORGE WASHINGTON UNIV	9,004	9,905	6,468	5,948	0	1,174	7,678	152
72 UNIV OREGON HLTH SCI CTR	8,755	9,408E	8,156I	7,217	0	2,870	5,885	0
73 WAYNE STATE UNIVERSITY	8,651	8,812	7,755	4,623	0	4,688	3,330	633
74 U TEX HLTH SCI CTR HOUSTN	8,493	5,856	4,765	5,747	0	5,213	2,981	399
75 N C STATE UNIV AT RALEIGH	8,451	7,343	7,236	6,896	6,338	2,113	0	0
76 TUFTS UNIVERSITY	8,430	5,413I	5,062I	4,561	0	4,482	3,948	0
77 SUNY AT STUNY BROOK	8,265	7,054	6,869	5,503	0	4,884	2,623	758
78 UNIV OF HAWAII-MANOA	8,256	7,624	6,738	6,069	304	3,103	849	3,991
79 WASHINGTON STATE UNIV	8,217	6,856	5,293	2,895	5,914	990	1,313	0
80 UNIV TENN CTR HEALTH SCI	8,182	6,44C	5,921	6,493	0	2,134E	5,662E	386E
TOTAL, 1ST 80 INSTS.	1,735,364	1,507,214	1,338,026	1,214,850	119,354	636,573	922,362	57,075
81 UNIVERSITY OF KANSAS	8,047I	4,617I	4,112I	6,030	991	4,254I	3,593I	112I
82 LOUISIANA STATE UNIV	7,913	6,594	4,821	4,870	299	3,669	3,939	5
83 THOMAS JEFFERSON UNIV	7,739E	7,514	6,064	6,147	0	1,548E	6,191E	0
84 GEORGETOWN UNIVERSITY	7,574	6,943	5,454	4,892	0	2,929	3,570	1,075
85 SUNY DOWNSTATE MED CTR	7,358	7,752	8,036	8,200	0	2,185	5,173	0
86 TULANE UNIVERSITY	7,006E	6,594I	6,341	6,539	0	2,508E	2,917E	1,591E
87 INST OF AGRI UNIV OF TENN	6,878I	5,942I	5,293	2,750	6,878I	0	0	0
88 MED UNIV OF SO CAROLINA	6,774	5,395	4,704	4,049	0	3,806	2,968	0
89 MEDICAL COLLEGE OF WIS	6,664	5,239	4,702	4,221	0	1,801	4,853	0
90 DARTMOUTH COLLEGE	6,400	5,814	5,469	5,001	0	4,609	1,023	769
TOTAL, 1ST 90 INSTS.	1,937,717	1,569,618	1,393,022	1,267,549	126,629	663,882	956,539	60,617
91 VA POLYTECH INST & ST U	6,350	5,428	6,021E	5,677	5,338	836	176	0
92 RUSH UNIVERSITY	5,963	5,232	5,177	2,516	0	1,506	3,939	618
93 UNIV OF TEXAS AT AUSTIN	5,551	4,590	3,710	4,015	0	4,907	644	0
94 HOWARD UNIVERSITY	5,521	3,293	4,391	2,500	0	2,191	1,203	2,127
95 UNIV OF CAL RIVERSIDE	5,352	4,137	3,525	3,363	1,667	3,680	5	0
96 ALBANY MEDICAL COLLEGE	5,351	5,434	5,588	3,917	0	1,605	3,746	0
97 CALIFORNIA INST OF TECH	5,317	4,693	3,864	1,808	0	5,317	0	0
98 U OF NEB MED CTR AT OMAHA	5,213	4,935	5,212	4,690	0	4,536	677	0
99 MEDICAL COL OF GEORGIA	5,123	4,752	4,348	3,807	0	2,357	2,707	59
100 OKLAHOMA STATE UNIVERSITY	5,050I	2,395I	3,197I	3,335	2,432I	1,197I	1,451I	0
TOTAL, 1ST 100 INSTS.	1,862,508	1,614,507	1,438,055	1,306,177	136,066	691,974	971,047	63,421
TOTAL, ALL OTHER INSTS.	229,328	203,227	187,068	167,806	61,755	112,357	49,752	5,464

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-36. -- R&D EXPENDITURES IN THE BIOLOGICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	1,392,578	969,876	858,882	772,287	804,331	704,341	627,151	575,128
1 HARVARD UNIVERSITY	39,566E	34,979E	29,921E	26,738	29,950	26,477	23,929	21,384
2 ROCKEFELLER UNIVERSITY	29,383	27,299	24,148	24,352	15,856	13,999	12,172	11,537
3 UNIV OF PENNSYLVANIA	28,620	23,550	13,385	13,418	22,736	18,674	11,265	10,942
4 JOHNS HOPKINS UNIVERSITY	26,834	20,195E	16,934	14,731	24,212	17,224E	14,720	12,658
5 UNIV OF CAL BERKELEY	21,908	19,977	18,102	16,850	15,093	13,099	12,747	11,537
6 UNIV OF WIS-MADISON	21,725	19,738	17,436	16,730	13,956	12,807	11,096	10,619
7 UNIV OF CAL DAVIS	21,413	18,053	16,285	14,566	14,534	12,160	10,989	9,781
8 YALE UNIVERSITY	21,201	18,478	15,848	12,936	19,714	17,000	14,781	11,976
9 MASS INST OF TECHNOLOGY	19,033	17,348	14,661	13,018	15,464	13,868	11,908	11,265
10 UNIVERSITY OF CHICAGO	18,442E	17,589E	17,097E	17,053	16,293	14,534	13,637	14,323
TOTAL, 1ST 10 INSTS.	248,125	216,206	183,817	170,392	187,769	159,842	137,244	126,023
11 UNIVERSITY OF MICHIGAN	18,301	15,431	16,076	13,604	13,623	10,714	12,240	10,191
12 CORNELL UNIVERSITY	17,334	14,597	19,597	11,508	10,508	8,902	9,878	6,853
13 UNIV OF CAL LOS ANGELES	17,182	15,581	15,629	17,865	14,832	13,487	13,521	15,338
14 UNIVERSITY OF ROCHESTER	17,170	15,969	14,768	14,808	13,291	12,168	11,379	11,734
15 WASHINGTON UNIVERSITY	16,586	16,825	16,296	11,287	12,514	12,795	12,506	9,520
16 UNIVERSITY OF MINNESOTA	16,572	13,696	11,853	10,170	10,740	10,578	8,649	7,673
17 UNIVERSITY OF CONNECTICUT	15,405	15,199	12,822	11,702	10,216	9,095	7,732	6,740
18 UNIVERSITY OF WASHINGTON	15,847	14,164	11,979	10,350	14,027	12,523	10,943	9,642
19 BAYLOR COL OF MEDICINE	15,110	14,051	11,684	10,928	12,651	11,333	9,453	10,051
20 UNIV OF CAL SAN FRANCISCO	14,198	13,194	11,904	9,891	12,046	11,346	10,026	8,284
TOTAL, 1ST 20 INSTS.	412,820	364,913	326,425	292,505	312,216	272,783	243,581	222,049
21 UNIV OF NC AT CHAPEL HILL	13,919	9,849	7,224	6,744	12,712	8,823	6,226	5,860
22 MICHIGAN STATE UNIVERSITY	13,653	10,357	10,689	9,646	9,027	6,336	5,838	6,026
23 DUKE UNIVERSITY	13,332	11,320	9,506	9,315	12,683	10,438	8,774	8,742
24 COLUMBIA UNIV MAIN DIV	12,904	11,090	10,083	17,343	11,321	9,356	8,255	14,816
25 PURDUE UNIVERSITY	12,036	10,337	8,827	8,145	7,492	6,359	5,119	5,003
26 OHIO STATE UNIVERSITY	11,724	8,330	6,721	4,303	7,174	4,603	3,166	2,181
27 UNIVERSITY OF CINCINNATI	11,639	9,365	7,134	6,033	8,039	6,123	4,453	3,582
28 YESHIVA UNIVERSITY	11,202	9,104	8,338	7,561I	8,272	7,448	7,098	6,796I
29 NEW YORK UNIVERSITY	10,536	9,934	9,081	7,124	9,406	7,311	6,737	5,664
30 U TEX HLTH SCI CTR DALLAS	10,264	8,753	7,675	0	8,420	7,435	6,134I	0
TOTAL, 1ST 30 INSTS.	534,033	463,432	411,703	368,719	406,762	347,015	305,361	280,709
31 UNIVERSITY OF GEORGIA	9,986	10,714	10,265	6,811	7,600	6,499	6,111	4,592
32 UNIVERSITY OF ARIZONA	9,418	7,828	6,087	4,955	5,893	4,794	3,376	2,493
33 UNIV OF CAL SAN DIEGO	9,364	8,706	7,876	6,944	8,734	8,131	7,274	6,437
34 VANDERBILT UNIVERSITY	9,202	5,204	5,627	6,725	8,217	4,401	4,784	5,915E
35 COLORADO STATE UNIVERSITY	8,902	8,863	7,889	7,605	6,576	6,475	5,723	5,613
36 UNIVERSITY OF UTAH	8,764	6,905	8,407	7,016	7,931	6,188	7,579	5,813
37 PENNSYLVANIA STATE UNIV	8,742	9,024	7,572	6,539	7,615	7,138	6,559	5,507
38 CASE WESTERN RESERVE UNIV	8,570	7,721	5,930	5,377	6,310	5,584	4,199	3,657
39 UNIV OF CAL RIVERSIDE	8,410	6,232	6,035	5,305	3,680	2,373	2,066	1,780
40 UNIVERSITY OF IOWA	8,366	7,088	6,145	5,215	7,600	6,060	5,255	4,737
TOTAL, 1ST 40 INSTS.	623,757	540,717	483,536	431,211	476,919	404,658	358,336	327,153
41 UNIV OF CAL IRVINE	8,312	6,547	5,838	4,838	7,522	5,799	4,980	3,968E
42 OREGON STATE UNIVERSITY	7,837	7,108	4,508	5,810	4,311	3,937	2,768	3,088
43 UNIVERSITY OF COLORADO	7,595	11,957E	10,758	9,230	6,199	9,238E	8,059	7,083
44 NORTHWESTERN UNIVERSITY	7,434	4,760	4,133	3,999	6,484	3,886	3,355	3,275
45 UNIV OF MD BALT PROF SCH	7,422	6,061	5,560	5,154	7,039	5,658	4,978	4,454
46 VIRGINIA COMMONWLTH UNIV	7,398	6,556	5,049	4,783	6,107	5,275	3,993	3,970
47 TEMPLE UNIVERSITY	7,282E	6,914E	7,274	6,765	6,034	5,734	5,990	5,507
48 NORTH DAKOTA STATE UNIV	7,185	5,698	5,481	4,826	1,052	1,003	875	831
49 UNIV OF ILL URBANA	7,184	6,074	5,363	4,145	6,492	5,266	4,531	3,843
50 UNIV OF TEX CANCER CENTER	7,182	6,882	6,505	6,345	2,797	2,808	2,926	2,761
TOTAL, 1ST 50 INSTS.	698,588	609,284	544,005	487,106	530,954	453,262	400,660	365,933

SEE FOOTNOTES AT END OF TABLE.

TABLE B-36. -- R&D EXPENDITURES IN THE BIOLOGICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 WAYNE STATE UNIVERSITY	7,164	6,372	4,860	2,596	4,688	4,215	3,239	2,176
52 UNIVERSITY OF PITTSBURGH	7,063	6,462	6,755	5,737	6,189	5,497	5,226	5,110
53 N C STATE UNIV AT RALEIGH	7,051	6,741	6,239	5,470	2,113	1,836	1,809	1,724
54 RUTGERS THE ST UNIV OF NJ	6,966	7,505	7,213	5,968	3,673	3,400	3,577	2,813
55 U TEX HLTH SCI CTR S ANTO	6,964	6,064	4,857	3,129	5,459	4,736	3,932	2,772
56 UNIV OF TEXAS AT AUSTIN	6,911	5,757	4,570	4,582	4,907	4,220	3,332	3,343
57 SUNY AT STONY BROOK	6,841	5,802	5,411	4,171	4,884	4,143	4,235	3,522
58 IOWA ST U OF SCI & TECH	6,635	5,287	4,738	3,125	2,826	2,376	2,056	1,214
59 LOUISIANA STATE UNIV	6,568	5,116	4,153	3,733	3,669	2,747	2,321	2,200
60 UNIVERSITY OF VIRGINIA	6,335	6,224	5,177	4,910E	5,845	5,778	4,838	3,953E
TOTAL, 1ST 60 INSTS.	767,086	670,614	597,978	530,527	575,207	492,210	435,055	394,790
61 UNIV ALABAMA BIRMINGHAM	6,326	4,667	2,492	2,570	5,892	4,018	2,091	2,095
62 CUNY MT SINAI SCH OF MED	6,236	4,954	4,822	4,867	5,199	4,218	4,122	4,287
63 CARNEGIE-MELLON UNIV	6,226	5,274	599	767	2,447	1,487	533	619
64 CALIFORNIA INST OF TECH	6,206	5,446	4,477	5,529	5,317	4,693	3,954	4,808
65 UNIV OF MISSOURI COLUMBIA	6,194	4,628	4,286	4,226	4,074	1,710	1,737	1,585
66 UNIVERSITY OF MIAMI	6,073	6,101	4,588	5,419	4,902	4,277	4,416	4,503
67 U OF NEB MED CTR AT OMAHA	6,040	5,895	5,741	5,489	4,536	4,407	4,395	4,213
68 INDIANA UNIV	5,877	5,421	5,723	4,162	4,775	4,383	4,487	3,349
69 UNIV OF ILL MED CTR CHGO	5,791	4,393	3,986	3,387	4,069	3,153	2,750	2,543
70 U TEX HLTH SCI CTR HOUSTN	5,638	4,151	2,460	2,269	5,213	3,815	2,153	2,135
TOTAL, 1ST 70 INSTS.	827,693	721,344	638,532	569,212	621,631	528,371	465,916	424,927
71 U TEX MED BRNCH GALVESTON	5,623	4,581	3,746	6,735	4,615	3,806	3,050	3,877
72 COL OF MED & DENT OF N J	5,572	4,529	3,505	973	4,290	3,187	2,751	780
73 BRANDEIS UNIVERSITY	5,284	5,487	4,733	4,215	5,045	5,244	4,599	3,952
74 UNIV OF VT & ST AGRIC COL	5,063	4,628	3,720	3,220	4,225	3,857	3,075	2,603
75 DARTMOUTH COLLEGE	4,949	4,419	4,117	3,619	4,609	4,078	3,917	3,453
76 TUFTS UNIVERSITY	4,843	3,518I	3,307I	2,963	4,482	2,940I	2,750I	2,477
77 UNIV OF HAWAII-MANOA	4,702	4,440	4,385	4,229	3,103	2,967	2,994	2,852
78 MED UNIV OF SO CAROLINA	4,615	3,178	3,061	2,821	3,906	2,763E	2,513	2,311
79 UNIVERSITY OF KANSAS	4,548I	3,161I	2,813I	3,710	4,254I	2,441I	2,174I	3,199
80 GEORGETOWN UNIVERSITY	4,333	4,200	3,119	2,670	2,929	3,106	2,153	2,036
TOTAL, 1ST 80 INSTS.	877,225	763,485	675,038	604,367	662,989	562,760	495,992	452,472
81 UNIV OF ALASKA FAIRBANKS	4,127	2,927	3,556	4,372	2,167	1,824	2,555	3,387
82 UNIVERSITY OF FLORIDA	4,043F	3,486	4,442	3,379	2,012E	2,219	3,097	2,354
83 TULANE UNIVERSITY	3,901	3,690	3,548	3,659	2,505E	3,196I	3,071	3,157
84 FLORIDA STATE UNIVERSITY	3,861	3,198	1,966I	1,922	2,051	1,771	1,139I	1,113E
85 UTAH STATE UNIVERSITY	3,861	2,552	2,813E	3,545	2,472	1,653	2,391E	2,970
86 SUNY DOWNSTATE MED CTR	3,856	3,077	2,759	2,815	2,185	2,307	2,429I	2,479
87 ST LOUIS UNIVERSITY	3,674	3,674	4,017	4,166I	3,076	3,076	3,626	3,917I
88 UNIV OREGON HLTH SCI CTR	3,644	3,185E	3,178I	2,734	2,870	1,273E	1,235I	1,093E
89 PRINCETON UNIVERSITY	3,609	3,574	3,014	3,064	2,431	2,715	2,050	2,167
90 UNIVERSITY OF NEW MEXICO	3,586	3,236	2,667	2,287	3,073	2,656	2,210	1,847
TOTAL, 1ST 90 INSTS.	915,387	796,082	706,998	636,310	687,834	585,448	519,555	476,956
91 ALBANY MEDICAL COLLEGE	3,426	3,066	2,678	2,444	1,605	1,631	1,799	1,173
92 CLEMSON UNIVERSITY	3,379	1,275	1,614	251	947	642	307	115
93 OKLAHOMA STATE UNIVERSITY	3,264I	3,127I	2,689I	2,552	1,157I	549I	732I	764
94 WAKE FOREST UNIVERSITY	3,185E	3,010E	2,980	2,457	3,185E	3,010E	2,734	2,293
95 EMORY UNIVERSITY	3,131	2,874	2,546	2,387	2,982	2,736	2,355	2,219
96 U MASS MED SCHL WORCESTER	3,118	4,1[illegible]	2,952	2,261	2,029	2,966	2,029	1,655
97 KANS ST U - AG & APP SCI	3,054	2,496	1,964	1,225	1,766	1,375	1,069	771
98 UNIVERSITY OF MISSISSIPPI	2,890	1,537E	1,696	1,220E	2,123	1,048E	1,157	961E
99 STANFORD UNIVERSITY	2,858	12,514	10,657E	12,151	2,590	11,378	9,612	11,119
100 WEST VIRGINIA UNIVERSITY	2,719	1,815	1,299	918	1,870	1,472	1,056	679
TOTAL, 1ST 100 INSTS.	946,411	831,904	738,073	664,176	708,088	612,255	542,555	498,714
TOTAL, ALL OTHER INSTS.	136,167	133,972	120,809	108,111	96,243	92,086	84,596	76,414

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-37. -- R&D EXPENDITURES IN THE MEDICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	1,379,172	1,201,052	1,093,499	950,907	1,020,809	879,925	791,057	712,327
1 UNIV OF CAL SAN FRANCISCO	53,184	42,564	39,296	35,243	43,271	34,685	31,938	28,915
2 UNIVERSITY OF MINNESOTA	47,208	39,218	35,567	31,118	33,867	27,250	24,334	22,349
3 COLUMBIA UNIV MAIN DIV	45,311	35,910	30,911	17,675	36,097	27,657	23,367	13,488
4 UNIVERSITY OF WASHINGTON	44,478	37,294	35,211	28,530	36,783	31,529	29,032	23,824
5 STANFORD UNIVERSITY	43,753	30,078	25,918E	20,263	40,738	27,648	23,787	19,767
6 JOHNS HOPKINS UNIVERSITY	41,092	45,122E	38,215	37,807	35,139	38,162E	31,132	30,619
7 UNIV OF WIS-MADISON	36,887	33,460	29,797	27,155	25,126	22,596	20,233	18,767
8 UNIV OF SOUTHERN CAL	34,466	28,292	27,045	13,261	20,727	20,003	18,951	10,623
9 UNIV OF CAL LOS ANGELES	32,434	25,770	23,061	21,062	23,525	19,124	17,807	16,286
10 UNIVERSITY OF MICHIGAN	32,360	27,484	22,674	20,150	21,009	17,390	14,510	12,741
TOTAL, 1ST 10 INSTS.	411,173	345,192	307,675	252,264	316,282	266,044	235,201	197,379
11 YALE UNIVERSITY	32,252	28,729	22,650	22,327	28,286	23,845	19,126	18,738
12 UNIV OF CAL SAN DIEGO	30,226	24,648	21,424	19,822	25,346	21,573	18,444	17,744
13 UNIV OF PENNSYLVANIA	28,815	26,383	34,573	31,206	21,409	18,519	22,528	19,691
14 WASHINGTON UNIVERSITY	28,711	24,646	20,785	17,974	23,387	19,961	15,963	15,193
15 HARVARD UNIVERSITY	27,033E	24,550E	22,686E	20,289	20,462	18,585	17,093	15,289
16 CORNELL UNIVERSITY	26,667	22,228	13,541	18,665	19,134	15,401	12,306	13,690
17 NEW YORK UNIVERSITY	25,883	26,697	27,244	28,395	17,838	19,608	20,364	22,224
18 UNIVERSITY OF COLORADO	25,492	10,730E	9,653	8,456	18,994	7,678E	6,735	6,295
19 UNIV ALABAMA BIRMINGHAM	23,821	22,196	20,015	16,337	18,738	18,315	17,395	14,881
20 BAYLOR COL OF MEDICINE	22,798	19,625	15,747	12,427	18,560	14,971	11,957	11,012
TOTAL, 1ST 20 INSTS.	692,871	575,624	515,993	448,162	529,436	444,500	397,922	352,136
21 YESHIVA UNIVERSITY	21,854	20,274	18,406	13,608I	16,137	16,443	15,558	12,208I
22 UNIV OF TEX CANCER CENTER	20,862	21,643	17,083	15,759	12,149	13,463	13,546	10,034
23 CUNY MT SINAI SCH OF MED	20,460	18,131	16,598	14,441	15,961	13,623	12,196	11,749
24 UNIVERSITY OF CHICAGO	19,128E	21,214E	21,654E	24,449	15,386	14,318	14,362	16,412
25 BOSTON UNIVERSITY	18,917	16,546	15,751	15,043	17,681	15,264	14,672	13,827
26 UNIVERSITY OF MIAMI	18,888	17,702	18,001	14,989	14,275	13,131	12,463	11,595
27 UNIVERSITY OF IOWA	18,854	16,020	14,631	12,775	16,172	13,107	11,417	10,470
28 UNIVERSITY OF ROCHESTER	18,818	15,718	13,856	13,312	12,930	10,562	9,354	8,394
29 CASE WESTERN RESERVE UNIV	17,594	15,049	11,472	10,645	12,173	9,619	7,198	7,169
30 U TEX HLTH SCI CTR DALLAS	16,303	13,823	12,030	16,755	12,432	10,400	9,559I	13,383
TOTAL, 1ST 30 INSTS.	874,549	751,744	675,435	599,938	674,731	574,430	515,467	467,377
31 NORTHWESTERN UNIVERSITY	16,018	13,925	11,144	8,956	9,533	8,594	6,951	5,642
32 DUKE UNIVERSITY	15,698	17,247	16,403	13,082	14,570	14,204	12,943	11,403
33 UNIV OF NC AT CHAPEL HILL	13,978	9,574	9,359	10,274	11,521	7,813	7,448	8,537
34 SUNY AT BUFFALO	13,963	9,465	7,595	7,733	9,249	5,176	4,323	5,909
35 UNIVERSITY OF CONNECTICUT	13,736	10,565	8,830	6,730	9,037	7,298	6,094	4,555
36 UNIVERSITY OF FLORIDA	13,723E	11,932	18,662	7,402	5,449E	6,010	4,583	3,912
37 UNIVERSITY OF CINCINNATI	13,098	11,233	14,025	12,912	5,666	4,853	4,071	4,212
38 UNIVERSITY OF UTAH	11,632	12,948	9,138	6,114	10,015	11,277	9,000	5,126
39 UNIVERSITY OF ARIZONA	10,771	9,045	5,260	4,270	7,805	6,864	4,152	3,086
40 VIRGINIA COMMONWLTH UNIV	10,279	8,082	6,319	6,931	9,242	6,650	5,308	5,477
TOTAL, 1ST 40 INSTS.	1,037,445	864,640	782,170	684,242	765,818	653,169	579,517	525,243
41 INDIANA UNIV	10,162	9,047	7,583	6,219	6,462	6,296	5,392	4,158
42 OHIO STATE UNIVERSITY	10,103	10,341	10,236	11,959	5,306	5,289	5,438	7,084
43 UNIV OF MISSOURI COLUMBIA	9,694	10,290	9,179	7,679	4,847	4,551	4,125	3,172
44 MICHIGAN STATE UNIVERSITY	9,367	7,375	8,287	6,412	4,668	3,566	3,396	2,675
45 UNIV OREGON HLTH SCI CTR	9,109	7,135E	6,921I	6,124	5,885	7,135E	6,921I	6,124E
46 UNIVERSITY OF NEW MEXICO	9,052	11,474	6,785	3,425	7,959	7,663	4,416	1,845
47 GEORGE WASHINGTON UNIV	8,978	7,935	6,583	5,870	7,678	6,510	5,409	5,034
48 UNIVERSITY OF VIRGINIA	8,534	6,850	6,313	5,140E	7,260	6,082	5,500	3,823E
49 EMORY UNIVERSITY	8,346	7,987	7,273	7,222	6,583	6,630	6,141	6,384
50 UNIV OF CAL DAVIS	8,278	6,385	6,266	5,972	5,469	4,324	4,123	4,303
TOTAL, 1ST 50 INSTS.	1,099,068	949,459	857,596	750,263	827,935	711,215	630,057	569,860

SEE FOOTNOTES AT END OF TABLE.

TABLE B-37. -- R&D EXPENDITURES IN THE MEDICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 MEDICAL COLLEGE OF WIS	8,175	6,397	6,026	3,928	4,063	3,543	3,539	2,753
52 ALBANY MEDICAL COLLEGE	7,994	7,155	5,690	5,704	3,746	3,803	3,530	2,744
53 UNIV OF CAL IRVINE	7,678	5,511	4,721	4,695	5,994	3,913	3,916	3,736
54 THOMAS JEFFERSON UNIV	7,625E	7,403	6,063	6,036	6,191E	6,011	4,730	4,799
55 UNIV OF ILL MED CTR CHGO	7,593	7,536	6,433	5,142	5,160	5,678	4,711	3,698
56 TEMPLE UNIVERSITY	7,557E	6,831E	7,136	7,066	5,269	4,901	5,121	5,149
57 UNIV OF MD BALT PROF SCH	7,411	5,655	5,126	5,732	6,928	4,912	4,541	4,790
58 UNIV OF CAL BERKELEY	7,291	7,036E	6,582E	7,056	6,274E	6,372E	5,835	6,607
59 U TEX HLTH SCI CTR S ANTO	7,008	5,471	5,007	3,307	4,699	3,416	2,910	2,375
60 SUNY DOWNSTATE MED CTR	6,943	7,280	7,423	7,578	5,173	5,445	5,607I	5,721
TOTAL, 1ST 60 INSTS.	1,174,343	1,015,734	917,801	806,501	881,332	759,209	674,777	612,231
61 COL OF MED & DENT OF N J	6,822	5,368	4,316	2,691	4,805	3,150	2,994	2,147
62 UNIV TENN CTR HEALTH SCI	6,594E	5,645	5,022	5,446	5,662E	4,281	4,111	4,734
63 UNIVERSITY OF KENTUCKY	6,355	6,334	5,291I	4,209I	4,576	4,580	3,284I	1,455I
64 UNIVERSITY OF PITTSBURGH	6,229	6,695	8,277	6,109	4,673	5,265	5,919	5,073
65 U TEX MED BRNCH GALVESTON	5,981	5,331	4,828	4,253	4,584	3,847	3,486	2,595
66 UNIV OF VT & ST AGRIC COL	5,901	5,203	6,046	6,115	5,033	4,221	5,259	5,299
67 RUSH UNIVERSITY	5,605	5,352	4,292	1,620	3,839	3,727	2,874	1,039
68 LOUISIANA STATE UNIV	5,308	4,263	3,083	7,706	3,939	3,600	2,454	2,260
69 WAYNE STATE UNIVERSITY	5,289	5,829	7,262	3,089	3,330	3,912	4,414	2,258
70 TUFTS UNIVERSITY	5,225	4,102I	3,802I	3,456	3,969	2,473I	2,312I	2,084
TOTAL, 1ST 70 INSTS.	1,233,652	1,069,956	970,400	846,195	925,721	798,265	711,914	641,173
71 GEORGETOWN UNIVERSITY	5,204	5,807	4,886	5,139	3,570	3,143	3,331	2,853
72 PENNSYLVANIA STATE UNIV	5,117	4,548	4,365	4,231	3,681	3,318	3,259	3,119
73 U TEX HLTH SCI CTR HOUSTN	4,810	3,237	4,056	3,831	2,881	1,870	2,602	3,044
74 U OF ARKANSAS MED SCI CAM	4,652	3,777	3,653	2,304	3,473	2,946	2,940	1,846
75 TULANE UNIVERSITY	4,536	4,29C	4,125	4,253	2,917E	2,429I	2,336	2,409
76 BROWN UNIVERSITY	4,500	3,594	2,634	2,336	3,500	2,753	1,749	1,678
77 NEW YORK MEDICAL COLLEGE	4,485E	4,485	2,840E	3,090E	3,739E	3,739	2,376E	2,506E
78 MED UNIV OF SO CAROLINA	4,000	3,027	2,865	2,404	2,968	2,632E	2,087	1,738
79 PURDUE UNIVERSITY	3,958	3,563	2,973	2,785	2,239	2,070	1,804	1,672
80 VANDERBILT UNIVERSITY	3,766	3,833	3,945	5,403	2,664	2,524	2,548	4,198
TOTAL, 1ST 80 INSTS.	1,278,690	1,110,017	1,006,742	881,971	957,353	825,689	736,916	666,226
81 UNIVERSITY OF KANSAS	3,762I	2,492I	2,217I	2,999	3,583I	2,056I	1,931I	2,695
82 SUNY UPSTATE MEDICAL CTR	3,746E	3,620I	4,208I	3,682	2,379E	1,946I	2,731I	2,391
83 SUNY AT STONY BROOK	3,675	2,897	2,704	2,300	2,623	2,068	1,887	1,889
84 UNIVERSITY OF MISSISSIPPI	3,447	3,556E	1,393	2,527E	1,411	1,799E	1,591	1,994E
85 MED COL OF OHIO AT TOLEDO	3,325	2,643	3,265	3,13C	2,434	2,076	2,440E	2,311E
86 UNIVERSITY OF GEORGIA	3,287	2,785	2,406	1,493	1,181	742	549	672
87 TEXAS A & M UNIVERSITY	3,235	2,619	2,199	2,086	1,672	1,041	599	706
88 UNIVERSITY OF LOUISVILLE	3,140	3,191	4,768E	4,463	2,213	2,053	2,698	3,116
89 LOYOLA UNIV - CHICAGO	3,048I	2,707I	2,578	442	2,459I	2,167I	2,064	299
90 MEDICAL COL OF GEORGIA	2,993	2,566	2,571	1,337	2,707	2,319	2,185	803
TOTAL, 1ST 90 INSTS.	1,312,338	1,139,093	1,037,051	906,429	980,015	843,956	755,561	683,089
91 WRIGHT STATE UNIVERSITY	2,987	2,905	3,836	668	2,000	1,995	1,964	419
92 IOWA ST U OF SCI & TECH	2,870	3,501	2,897	2,137	959	1,089	697	472
93 UNIF SERV UNIV OF HLTH SC	2,853	1,004	1,411	-	2,853	1,004	1,410	-
94 UNIV OF P R-MED SCI CAMPUS	2,717I	2,378I	2,113E	623I	2,717I	2,364I	2,135E	619I
95 WAKE FOREST UNIVERSITY	2,518E	2,380F	2,116	2,051	1,534E	1,430E	1,453	1,573
96 HAHNEMANN MED COL & HOSP	2,483E	2,401	2,140I	1,913	1,926E	1,797	1,633I	1,671
97 UNIV OF OKLA HLTH SCI CTR	2,475	2,571	2,165	-	1,844	2,070	1,590	-
98 LOMA LINDA UNIVERSITY	2,395E	2,162I	2,093I	1,829	1,822E	1,605I	921I	999
99 COLORADO STATE UNIVERSITY	2,315	895	2,898	1,088	1,679	305	2,239	845
100 WEST VIRGINIA UNIVERSITY	2,273	1,804	1,187	1,253	827	867	594	932
TOTAL, 1ST 100 INSTS.	1,338,224	1,161,094	1,059,901	917,991	998,176	858,482	770,277	690,419
TOTAL, ALL OTHER INSTS.	40,948	39,958	33,598	32,916	22,633	21,443	20,790	21,908

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DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE S-38. -- R&D EXPENDITURES IN PSYCHOLOGY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	111,019	100,389	89,664	85,129	81,036	72,257	63,996	63,669
1 UNIV OF WIS-MADISON	6,232	5,435	4,884	4,902	5,169	4,453	4,011	4,049
2 UNIVERSITY OF KANSAS	5,008I	3,904I	3,472I	4,313	4,457I	2,557I	2,278I	3,341
3 UNIVERSITY OF MICHIGAN	4,045	4,714	3,367	6,412	2,292	2,347	1,600	2,755
4 UNIVERSITY OF MINNESOTA	3,907	3,408	2,805	2,367	3,304	2,854	2,111	1,966
5 UNIVERSITY OF CONNECTICUT	3,761	2,886	2,912	1,136	2,249	1,688	1,553	428
6 ROCKEFELLER UNIVERSITY	3,760	3,960	4,174	3,016	1,898	1,881	1,527	1,420
7 UNIVERSITY OF COLORADO	3,599	2,197	1,667	1,297	2,597	1,590	1,409	1,111
8 UNIV OF CAL LOS ANGELES	2,934	2,766	2,555	1,961	2,780	2,631	2,458	1,869
9 UNIV OF CAL BERKELEY	2,708	2,204	2,025	1,696	1,906	1,510	1,314	1,005
10 MASS INST OF TECHNOLOGY	2,572	1,982	1,778	1,725	2,449	1,872	1,596	1,555
TOTAL, 1ST 10 INSTS.	38,526	33,456	29,639	28,825	29,101	23,383	20,083	19,499
11 UNIV OF SOUTHERN CAL	2,383	454	653	476	1,92	380	572	471
12 RUTGERS THE ST UNIV OF NJ	2,365	1,804	3,630	3,051	1,51	1,401	2,913	2,411
13 CORNELL UNIVERSITY	2,280	2,155	1,542	1,046	9?2	912	495	321
14 STANFORD UNIVERSITY	2,208	1,731	1,702E	1,197	1,510	1,124	1,137	1,161
15 UNIV OF ILL URBANA	2,039	1,948	1,859	1,880	1,594	1,598	1,459	1,555
16 MICHIGAN STATE UNIVERSITY	1,891	1,749	1,634	519	806	929	935	327
17 HARVARD UNIVERSITY	1,785E	1,664E	1,379E	1,263	1,351	1,262	1,177	1,079
18 FLORIDA STATE UNIVERSITY	1,594	1,362	848I	837	783	609	438I	409E
19 UNIV OF TEXAS AT AUSTIN	1,494	1,262	1,059	2,420	1,146	921	945	2,070
20 UNIVERSITY OF WASHINGTON	1,462	1,381	1,416	1,155	1,176	1,039	1,071	985
TOTAL, 1ST 20 INSTS.	58,027	49,966	45,361	42,669	41,827	33,558	31,055	30,397
21 THE WRIGHT INSTITUTE	1,461	968	759	465E	1,392	922	752	465E
22 INDIANA UNIV	1,311	1,020	816	462	989	839	752	454
23 PRINCETON UNIVERSITY	1,264	1,072	930	916	1,084	911	842	693
24 YALE UNIVERSITY	1,243	1,658	1,677	1,409	911	1,404	1,413	1,232
25 UNIVERSITY OF ROCHESTER	1,199	943	1,068	936	792	639	811	620
26 UNIV OF PENNSYLVANIA	1,142	966	755	602	1,059	881	704	538
27 JOHNS HOPKINS UNIVERSITY	1,131	642E	606	542	886	512E	474	422
28 CARNEGIE-MELLON UNIV	1,093	847	744	704	812	745	586	554
29 U OF HOUSTON CENTRAL CAM	1,090	743	383I	335	607	308	176I	156
30 NORTHWESTERN UNIVERSITY	948	596	681	775	886	549	654	767
TOTAL, 1ST 30 INSTS.	69,911	58,421	53,780	49,715	51,244	41,268	38,319	36,293
31 UNIVERSITY OF OREGON MAIN	940	870	804	804	908	753	712	632
32 UNIVERSITY OF FLORIDA	938E	809	389	335	521E	575	350	318
33 NEW YORK UNIVERSITY	897	643	683	437	556	455	527	306
34 UNIVERSITY OF CHICAGO	858E	1,114E	1,111E	1,125	648	892E	927	1,002
35 UNIVERSITY OF DENVER	853	704	557	637	725	622	453	420
36 UNIVERSITY OF GEORGIA	842	927	883	611	242	370	349	274
37 UNIV OF MD COLLEGE PARK	824	684	575	456	644	591	533	416
38 UNIV OF WEST FLORIDA	810	1,050	-	273	727	848	-	212
39 UNIV OF MASS AT AMHERST	757	891	724	609	575	755	575	460
40 WASHINGTON UNIVERSITY	738	604	575	327	672	548	529	323
TOTAL, 1ST 40 INSTS.	78,368	66,717	60,081	55,329	57,462	47,678	43,274	40,651
41 SUNY AT STONY BROOK	734	618	601	424	421	441	470	373
42 OHIO STATE UNIVERSITY	733	469	346	324	593	389	257	277
43 UNIV OF CAL SAN DIEGO	715	693	627	754	706	690	610	742
44 ST JOHN'S UNIVERSITY (NY)	710	660	629	612	0	0	0	0
45 UNIVERSITY OF IOWA	696	532	459	401	506	299	282	219
46 UNIV OF CAL SANTA BARBARA	643	480	358	155	610	447	307	134
47 UNIV OF SOUTHWESTERN LA	629	637	636	-	0	0	0	-
48 DUKE UNIVERSITY	602	359	382	393	588	346	380	381
49 VANDERBILT UNIVERSITY	600	391	355	359	421	279	245	336
50 PURDUE UNIVERSITY	569	600	760	810	292	332	534	560
TOTAL, 1ST 50 INSTS.	84,994	72,156	65,234	59,561	61,599	50,901	46,339	43,672

SEE FOOTNOTES AT END OF TABLE.

TABLE 3-38. -- R&D EXPENDITURES IN PSYCHOLOGY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
51 BOWLING GREEN STATE UNIV	538I	500	431	295	417I	387	290	231
52 NORTHEASTERN UNIVERSITY	536I	473	334	287	518I	456	313	274
53 BROWN UNIVERSITY	500	599	599	580	500	414	530	572
54 UNIVERSITY OF VIRGINIA	499	215	221	266E	469	200	196	208E
55 COLUMBIA UNIV MAIN DIV	491	365	408	565	415	348	356	526
56 CUNY GRAD SCH & UNIV CTR	488	242	130	402	452	322	79	392
57 SUNY AT BINGHAMTON	485	405	358	283	342	188	271	250
58 U TENNESSEE KNOXVILLE	485I	485	417	149	398I	398	331	105
59 UNIV OF MISSOURI COLUMBIA	479	395	369	369	135	93	69	97
60 SUNY AT ALBANY	459E	71E	69E	69	382	63	60	69
TOTAL, 1ST 60 INSTS.	99,953	75,857	68,550	62,926	65,627	53,770	48,944	46,395
61 UNIVERSITY OF PITTSBURGH	427	525	718	597	368	485	559	529
62 LOMA LINDA UNIVERSITY	417E	473I	364I	347	316E	412I	237I	257
63 SETON HALL UNIVERSITY	390I	344I	305I	55I	390I	344I	305I	55I
64 CUNY BROOKLYN COLLEGE	380I	331	-	248	276I	245	-	199
65 UNIV OF CENTRAL FLORIDA	357	141	-	7	357	141	-	7
66 STEVENS INSTITUTE OF TECH	352	318	343	388	0	0	0	0
67 IOWA ST U OF SCI & TECH	343	354	328	203	140	138	147	57
68 COLORADO STATE UNIVERSITY	339	177	116	173	321	156	105	149
69 HAHNEMANN MED COL & HOSP	326E	315	0	0	252E	235	0	0
70 SYRACUSE UNIVERSITY	325	222	414	214	153	172	155	214
TOTAL, 1ST 70 INSTS.	93,609	79,057	71,138	65,158	68,200	56,098	50,392	47,863
71 CALIF ST COL STANISLAUS	323	0	-	1	0	0	-	1
72 UNIV OF OKLA HLTH SCI CTR	320	358	327	-	287E	243	266	-
73 UNIV OF NEBRASKA-LINCOLN	308	313	223	237	130	106	29	73
74 ILLINOIS INST OF TECH	297I	265E	3	13	116I	102E	3	13
75 UNIV OF NC AT CHAPEL HILL	287	369	218	326	283	364	208	315
76 BRANDEIS UNIVERSITY	283	253	201	193	267	243	231	189
77 LOYOLA UNIV - CHICAGO	269I	238I	226	114	227I	200I	190	55
78 UNIV OF SOUTH CAROLINA	265E	255	78I	69	127E	122	57I	60
79 ARIZONA STATE UNIVERSITY	262	457	316	262	237	155	333	245
80 UNIV OF CAL SANTA CRUZ	258	281	290	240	247	241	235	195
TOTAL, 1ST 80 INSTS.	94,481	81,846	73,020	66,613	70,121	57,874	51,894	49,009
81 SAN DIEGO STATE UNIV	251	32	60	357	236	17	59	342
82 UNIV OF OKLAHOMA NORMAN	249	162	88	21	122	97	41	18
83 COLUMBIA U TEACHERS COL	248	240	282	442	216	210	229	339
84 WAYNE STATE UNIVERSITY	246	206	236	114	74	77	154	73
85 RUSH UNIVERSITY	243	349	119	6	232	296	113	0
86 LOUISIANA STATE UNIV	241	226	127	167	128	98	25	106
87 DARTMOUTH COLLEGE	238	163	157	74	225	152	148	66
88 PENNSYLVANIA STATE UNIV	236	175	385	637	119	83	139	131
89 NEW SCH FOR SOC RESEARCH	228E	215I	191	334	222E	211I	187	334
90 TEXAS TECH UNIVERSITY	224	37	55	58	187	16	37	22
TOTAL, 1ST 90 INSTS.	98,885	83,649	74,720	68,823	71,882	59,131	53,036	50,440
91 UNIV OF MASS BOSTON	223I	207	-	224	143I	133	-	86
92 UNIVERSITY OF MIAMI	222	103	51	48	209	88	49	45
93 SUNY AT BUFFALO	221	215	239	349	176	165	198	343
94 CLARK UNIVERSITY	218	173	209	242	146	126	154	226
95 TUFTS UNIVERSITY	217	101	91	8	201	101	91	8
96 SAN FRANCISCO STATE UNIV	214	283	-	91	212	283	-	91
97 UNIV OF CAL RIVERSIDE	213	224	169	161	204	215	154	142
98 CASE WESTERN RESERVE UNIV	210	397	309	225	139	274	246	179
99 TULANE UNIVERSITY	206	195	187	193	132E	178I	171	176
100 UNIV OF NEVADA - RENO	204	247	298	299	198	244	296	299
TOTAL, 1ST 100 INSTS.	101,033	85,703	76,191	70,663	73,640	60,847	54,292	52,035
TOTAL, ALL OTHER INSTS.	9,986	14,686	13,473	14,466	7,396	11,410	9,734	11,613

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-33. -- R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCIO-LOGY	OTHER
	1980	1979	1978	1977				
TOTAL, ALL INSTITUTIONS	341,490	294,622	277,497	268,032	94,417	49,161	89,351	109,511
1 UNIVERSITY OF MICHIGAN	21,048	19,889	15,978	14,240	882	5,022	13,203	1,941
2 UNIV OF PENNSYLVANIA	13,868	11,576	10,555	9,783	1,511	3,505	1,324	7,528
3 UNIV OF WIS-MADISON	13,137	10,093	8,762	7,670	3,367	341	8,711	718
4 UNIV OF CAL BERKELEY	10,292	8,707	8,132	8,193	3,005	3,867	942	2,478
5 UNIV OF ILL URBANA	8,761	8,887	7,498	7,163	2,764	111	414	5,472
6 UNIV OF CAL LOS ANGELES	8,604	7,699	7,787	6,585	1,576	1,418	734	4,906
7 HARVARD UNIVERSITY	7,365E	7,316E	10,619E	8,626	1,783E	487E	1,854E	3,241E
8 UNIVERSITY OF GEORGIA	6,656	5,913	4,222	5,817	2,962	385	773	2,536
9 MICHIGAN STATE UNIVERSITY	6,531	5,362	4,185	4,123	3,031	292	2,921	287
10 CORNELL UNIVERSITY	6,393	5,720	4,742	4,678	1,893	557	1,292	2,661
TOTAL, 1ST 10 INSTS.	102,655	91,162	82,480	76,878	22,774	15,985	32,129	31,768
11 RUTGERS THE ST UNIV OF NJ	6,326	4,935	2,171	2,452	952	1,353	515	3,406
12 COLUMBIA UNIV MAIN DIV	6,090	5,416	4,251	2,954	2,941	574	756	1,809
13 UNIV OF TEXAS AT AUSTIN	5,338	4,007	3,320	4,806	991	1,564	1,474	1,289
14 SYRACUSE UNIVERSITY	5,267	3,138	2,910	1,277	471	579	350	3,867
15 UNIV OF SOUTHERN CAL	5,139	1,006	753	2,333	1,451	1,687	1,956	45
16 UNIVERSITY OF MINNESOTA	4,420	4,075	3,677	3,379	1,915	696	1,434	375
17 PURDUE UNIVERSITY	4,307	3,752	3,369	3,198	3,765	30	242	270
18 UNIVERSITY OF DENVER	4,278	6,002	4,287	3,163	2,470	173	1,535	0
19 STANFORD UNIVERSITY	4,038	2,240	2,064E	4,673	668	77	181	3,112
20 MASS INST OF TECHNOLOGY	4,008	4,362	4,062	2,891	1,815	1,036	0	1,157
TOTAL, 1ST 20 INSTS.	151,866	130,095	113,344	108,004	40,213	23,754	40,831	47,098
21 GEORGIA INSTITUTE OF TECH	4,006	2,209	2,634	2,371	3,727	139	140	0
22 UNIVERSITY OF ARIZONA	3,985	3,423	3,453	3,548	1,926	369	225	1,565
23 UNIV OF ARK FAYETTEVILLE	3,964E	4,249E	618	268	1,723E	0	53E	2,193E
24 YALE UNIVERSITY	3,769	3,166	2,735	2,547	1,179	93	218	2,279
25 UNIV OF NC AT CHAPEL HILL	3,411	2,419	1,883	4,118	230	15	2,436	730
26 PRINCETON UNIVERSITY	3,318	3,112	2,394	2,419	834	2,303	59	112
27 FLORIDA STATE UNIVERSITY	3,183	2,149	5,884I	5,766	197	442	2,172	372
28 ST JOHN'S UNIVERSITY (NY)	3,168	2,930	2,774	2,204	1,214	1,110	844	0
29 OHIO STATE UNIVERSITY	3,156	3,186	3,750	4,342	1,227	678	921	430
30 UNIV OF MISSOURI COLUMBIA	3,124	3,336	3,129	3,188	1,637	20	711	756
TOTAL, 1ST 30 INSTS.	186,950	160,270	142,598	138,775	54,012	28,923	48,490	55,525
31 IOWA ST U OF SCI & TECH	3,108	2,887	3,111	3,678	1,979	84	943	102
32 NEW YORK UNIVERSITY	2,940	2,841	3,927	3,267	850	616	40	1,434
33 UNIV OF CAL DAVIS	2,721	2,185	1,831	1,758	1,232	522	25	942
34 JOHNS HOPKINS UNIVERSITY	2,690	2,940E	2,148	2,117	497	53	1,468	672
35 UNIV OF WEST FLORIDA	2,632	824	-	1,361	29	531	750	1,312
36 CARNEGIE-MELLON UNIV	2,631	1,952	2,363	1,618	711	1,401	519	0
37 UNIV OF OKLAHOMA NORMAN	2,548	1,533	2,243	3,363	916	567	4	1,061
38 WEST VIRGINIA UNIVERSITY	2,475	2,167E	1,671	2,388	813	385	35	1,242
39 COLORADO STATE UNIVERSITY	2,426	1,825	1,806	1,560	499	94	157	1,676
40 PENNSYLVANIA STATE UNIV	2,417	2,174	2,135	2,081	1,842	254	0	321
TOTAL, 1ST 40 INSTS.	213,538	181,598	163,833	159,966	63,380	33,430	52,441	64,287
41 UNIV OF CAL SANTA BARBARA	2,342	2,013	1,307	817	9	324	1,253	757E
42 UNIV OF ILL CHICAGO CIR	2,317	1,368	776E	335	23	218	106	1,970
43 U TENNESSEE KNOXVILLE	2,278I	2,278	1,960	507	529I	181	27I	1,704I
44 UNIVERSITY OF COLORADO	2,270	1,722	1,036	1,225	190	122	3	1,955
45 UNIVERSITY OF CHICAGO	2,245E	2,857E	2,732E	3,314	656E	179E	253E	1,147E
46 BRANDEIS UNIVERSITY	2,161	1,845	670	1,446	19	183	9	1,951
47 UNIV OF NEBRASKA-LINCOLN	2,062	2,430	2,027	1,671	1,020	62	156	824
48 MISSISSIPPI STATE UNIV	2,018	2,367	1,949	947	1,332	0	686	3
49 OREGON STATE UNIVERSITY	1,982	1,840	1,070	1,207	1,066	30	213	676
50 TEXAS A & M UNIVERSITY	1,948	1,796	1,558	1,558	726	14	133	1,075
TOTAL, 1ST 50 INSTS.	235,161	202,114	178,918	172,993	68,965	34,580	55,237	76,346

SEE FOOTNOTES AT END OF TABLE.

TABLE B-39. -- R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCIO-LOGY	OTHER
	1980	1979	1978	1977				
51 NC AG & TECH STATE UNIV	1,947I	1,868I	-	656	653I	0	235I	1,009I
52 UNIVERSITY OF FLORIDA	1,930E	1,664	617	1,459	459E	0	297E	1,174E
53 UNIV OF ALASKA FAIRBANKS	1,928	2,603	2,308	1,829	621	350	621	336
54 LOUISIANA STATE UNIV	1,804	1,602	1,665	1,154	1,236	107	259	202
55 TEMPLE UNIVERSITY	1,765E	1,677E	1,462	1,755	150E	52	1,485E	78
56 UNIVERSITY OF WASHINGTON	1,735	1,288	1,265	1,977	156	505	877	197
57 AMERICAN UNIVERSITY	1,718	1,600	1,758	1,456	119	388	142	1,069
58 UNIV OF WIS-MILWAUKEE	1,626	1,978	1,520	989	86	327	233	992
59 GEORGE WASHINGTON UNIV	1,614	1,438	2,465	3,230	225	0	1,042	347
60 SUNY AT BINGHAMTON	1,597	811	858	523	133	921	140	403
TOTAL, 1ST 60 INSTS.	252,825	218,643	192,836	188,021	72,784	37,230	60,558	82,143
61 HOWARD UNIVERSITY	1,546	285	677	206	2	700	839	5
62 UTAH STATE UNIVERSITY	1,538	1,503	1,232	1,135	1,267	10	235	26
63 TEXAS CHRISTIAN UNIV	1,481	94	95	235I	23	0	349	1,109
64 UNIV OF CAL IRVINE	1,471	1,064	817	838	0	758	7	706
65 INDIANA UNIV	1,427	1,632	2,104	2,309	405	519	392	111
66 UNIV OF MD COLLEGE PARK	1,406	1,434	1,550	1,300	1,125	27	210	44
67 UNIV OF MAINE ORONO	1,402	631	629	1,110	673	167	0	562
68 UNIVERSITY OF NEW MEXICO	1,386	2,298	1,506	1,028	484	0	0	902
69 DUKE UNIVERSITY	1,381	1,221	1,350	1,398	123	425	675E	158E
70 SUNY AT BUFFALO	1,374	469	532	439	142	101	787	344
TOTAL, 1ST 70 INSTS.	267,237	229,274	203,328	198,019	77,029	39,937	64,162	86,110
71 UNIVERSITY OF CONNECTICUT	1,353	1,799	2,621	1,306	203	41	590	419
72 UNIV OF HAWAII-MANOA	1,348	1,219	1,123	1,268	484	12	168	684
73 OKLAHOMA STATE UNIVERSITY	1,339I	1,527I	1,200I	1,108	318I	0	43I	978I
74 WELLESLEY COLLEGE	1,304	0	-	4	0	10	1,294	0
75 SOUTHERN ILL U-CARBONDALE	1,262	1,324	934	694	78	10	46	1,128
76 UNIVERSITY OF IDAHO	1,243	1,347	1,810	2,077	755	53	284	151
77 PORTLAND STATE UNIVERSITY	1,226I	1,112	1,285	517	0	0	1,177I	47I
78 UNIV OF CAL SAN FRANCISCO	1,222	1,412	992	503	0	0	618	604
79 WAYNE STATE UNIVERSITY	1,210	1,172	1,132	884	201	88	824	97
80 VA POLYTECH INST & ST U	1,203	934	441E	384	1,124	9	70	0
TOTAL, 1ST 80 INSTS.	279,945	241,120	214,866	206,764	80,191	40,160	69,376	90,219
81 UNIVERSITY OF VIRGINIA	1,172	795	878	642E	574	251	347	0
82 ROCHESTER INST TECHNOLOGY	1,104	0	-	20	0	0	1	1,103
83 MONTANA STATE UNIVERSITY	1,076	512	380	490	423	0	60	593
84 UNIVERSITY OF PITTSBURGH	1,062	973	398	991	37E	150	226	649E
85 NORTH TEXAS STATE UNIV	1,059E	1,013	311	315	159E	111E	509E	281E
86 NORTHERN ILLINOIS UNIV	1,022	897	382	239I	210	515	217	80
87 ARIZONA STATE UNIVERSITY	1,015	1,546	728	508	372	48	15	580
88 NORTHWESTERN UNIVERSITY	982	958	860	785	467	242	31	242
89 US NAVAL POSTGRAD SCHOOL	939	767	719	689	234	271	434	0
90 UNIV OF MASS AT AMHERST	928	821	1,113	1,192	244	89	595	0
TOTAL, 1ST 90 INSTS.	290,304	249,402	220,635	212,635	82,910	41,837	71,811	93,746
91 GALLAUDET COLLEGE	919I	1,175I	-	921	0	0	0	919I
92 CREIGHTON UNIVERSITY	911I	807E	769E	0	0	0	911I	0
93 UNIVERSITY OF WYOMING	909	483	876	597	851	0	58	0
94 UNIV OF SOUTH FLORIDA	879	268	260	499	104	95	680	0
95 WASHINGTON UNIVERSITY	834	389	353	373	115	123	17	579
96 BOSTON UNIVERSITY	812	818	530	293	281	17	260	254
97 CLEMSON UNIVERSITY	801	934	787	101	101	0	0	700
98 FORDHAM UNIVERSITY	778I	659E	951E	293I	0	0	778I	0
99 SUNY AT STONY BROOK	766	892	1,871	481	65	288	23	390
100 UNIV OF ARK PINE BLUFF	765	277	-	256	0	143	622	0
TOTAL, 1ST 100 INSTS.	298,670	256,104	227,032	216,449	84,427	42,503	75,160	96,588
TOTAL, ALL OTHER INSTS.	42,772	38,518	50,465	51,583	9,990	6,658	13,201	12,923

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-40. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES1 FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCIO-LOGY	OTHER
	1980	1979	1978	1977				
TOTAL, ALL INSTITUTIONS	192,097	155,099	140,445	138,205	44,484	21,127	57,374	59,112
1 UNIVERSITY OF MICHIGAN	13,733	12,348	9,370	8,742	549	2,358	9,551	1,275
2 UNIV OF WIS-MADISON	9,580	6,802	5,652	4,910	1,937	126	7,239	278
3 UNIV OF PENNSYLVANIA	7,698	5,884	4,282	3,944	887	2,160	1,092	3,569
4 HARVARD UNIVERSITY	5,575	5,539	4,580	3,686	1,350	369	1,403	2,453
5 UNIV OF CAL BERKELEY	4,626	4,106	3,709	3,494	890	1,624	392	1,730
6 UNIV OF CAL LOS ANGELES	4,400	3,937	3,404	3,073	382	142	293	3,583
7 MICHIGAN STATE UNIVERSITY	4,153	3,152	2,584	2,124	2,505	153	1,233	212
8 STANFORD UNIVERSITY	3,770	1,913	1,813	4,206	593	66	179	2,932
9 RUTGERS THE ST UNIV OF NJ	3,769	3,181	701	877	402	428	445	2,494
10 COLUMBIA UNIV MAIN DIV	3,724	2,924	2,895	1,685	1,499	160	726	1,339
TOTAL, 1ST 10 INSTS.	61,028	49,786	38,990	36,741	10,994	7,586	22,583	19,865
11 UNIV OF ILL URBANA	3,658	3,161	2,892	3,052	875	98	293	2,392
12 UNIVERSITY OF DENVER	3,598	5,172	3,560	2,410	2,099	148	1,351	0
13 CORNELL UNIVERSITY	3,380	2,546	1,999	2,448	767	334	972	1,307
14 UNIV OF SOUTHERN CAL	3,166	664	607	2,067	609	638	1,913	7
15 MASS INST OF TECHNOLOGY	2,902	3,016	2,907	1,903	1,316	628	0	958
16 YALE UNIVERSITY	2,362	2,237	1,966	2,034	1,017	59	114	1,172
17 GEORGIA INSTITUTE OF TECH	2,321	1,301	1,468	1,335	2,160	81	30	0
18 UNIVERSITY OF MINNESOTA	2,225	2,170	1,527	1,091	859	172	1,096	99
19 UNIV OF TEXAS AT AUSTIN	2,142	2,124	1,129	1,756	64	257	1,059	763
20 PURDUE UNIVERSITY	2,087	2,210	1,900	1,736	1,700	1	172	214
TOTAL, 1ST 20 INSTS.	88,869	74,387	58,945	56,573	22,459	10,002	29,632	26,777
21 JOHNS HOPKINS UNIVERSITY	2,006	2,399E	1,460	1,320	108	7	1,376	515
22 CARNEGIE-MELLON UNIV	1,974	1,464	1,243	981	665	969	340	0
23 UNIVERSITY OF COLORADO	1,870	1,044	420	514	14	76	0	1,780
24 NC AG & TECH STATE UNIV	1,866I	1,790I	-	503	653I	0	235I	928I
25 NEW YORK UNIVERSITY	1,778	1,475	2,004	1,749	387	72	40	1,279
26 BRANDEIS UNIVERSITY	1,775	1,623	570	1,163	18	0	9	1,748
27 PRINCETON UNIVERSITY	1,771	1,172	1,252	1,072	226	1,406	50	89
28 UNIV OF CAL SANTA BARBARA	1,760	1,613	1,021	643	0	192	936	652E
29 UNIV OF NC AT CHAPEL HILL	1,730	960	588	2,658	188	15	805	722
30 OHIO STATE UNIVERSITY	1,718	1,659	1,970	2,989	530	549	434	205
TOTAL, 1ST 30 INSTS.	107,097	89,586	69,473	70,165	25,247	13,288	33,867	34,695
31 IOWA ST U OF SCI & TECH	1,714	1,404	1,520	1,224	1,159	50	479	26
32 AMERICAN UNIVERSITY	1,660	1,591	1,508	1,303	119	388	142	1,011
33 COLORADO STATE UNIVERSITY	1,561	899	1,322	915	167	19	75	1,300
34 UNIVERSITY OF CHICAGO	1,532	1,552	1,404	1,879	528	134	192	678
35 GEORGE WASHINGTON UNIV	1,393	1,315	2,205	2,972	73	0	1,031	289
36 UNIVERSITY OF ARIZONA	1,351	1,271	1,331	1,833	476	156	169	550
37 SYRACUSE UNIVERSITY	1,281	1,042	1,821	695	127	268	36	850
38 PENNSYLVANIA STATE UNIV	1,263	1,035	1,141	824	1,176	46	0	41
39 UNIV OF OKLAHOMA NORMAN	1,223	670	1,047	1,159	440	272	2	509
40 UNIVERSITY OF GEORGIA	1,214	1,280	899	1,132	668	0	311	235
TOTAL, 1ST 40 INSTS.	121,289	101,645	83,671	84,101	30,180	14,621	36,304	40,184
41 DUKE UNIVERSITY	1,201	824	912	1,010	111	273	659	158
42 UNIV OF CAL SAN FRANCISCO	1,199	1,408	987	492	0	0	517	682
43 UNIV OF MISSOURI COLUMBIA	1,196	1,594	1,429	1,594	561	14	225	396
44 SUNY AT BINGHAMTON	1,120	530	647	292	125	635	54	306E
45 UNIV OF ILL CHICAGO CIR	1,106	796	394	194	17	143	90	856
46 UNIV OF WIS-MILWAUKEE	1,101	1,354	1,043	547	69	283	134	615
47 UNIV OF CAL IRVINE	1,076	738	526	601	0	586	0	490
48 U TENNESSEE KNOXVILLE	1,026I	1,026	854	481	251I	7I	27I	741I
49 UNIVERSITY OF WASHINGTON	1,014	762	615	1,458	139	42	670	164
50 TEXAS CHRISTIAN UNIV	1,014	9	0	27I	0	0	144	870
TOTAL, 1ST 50 INSTS.	132,342	110,686	91,078	90,797	31,451	16,604	38,924	45,363

SEE FOOTNOTES AT END OF TABLE.

TABLE B-40. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1980 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCIO-LOGY	OTHER
	1980	1979	1978	1977				
51 SUNY AT BUFFALO	1,003	187	236	99	111	58	514	220
52 OREGON STATE UNIVERSITY	991	878	365	647	407	8	71	505
53 UNIV OF NEBRASKA-LINCOLN	983	1,159	731	561	182	11	16	774
54 PORTLAND STATE UNIVERSITY	975I	886	1,006	450	0	0	975I	0I
55 US NAVAL PUSTGRAD SCHOOL	939	765	717	689	234	271	434	0
56 MISSISSIPPI STATE UNIV	881	991	1,196	505	556	0	325	0
57 UNIV OF CAL DAVIS	863	706	541	557	432	134	10	287
58 UNIV OF WEST FLORIDA	846	147	-	119	1	21	593	231
59 ARIZONA STATE UNIVERSITY	817	767	453	263	280	46	13	479
60 WEST VIRGINIA UNIVERSITY	815	808	546	453	310	135	31	339
TOTAL, 1ST 60 INSTS.	141,455	117,980	96,869	95,140	33,964	17,288	42,036	48,197
61 TEXAS A & M UNIVERSITY	795	1,295	1,031	620	546	0	92	157
62 UNIV OF MD COLLEGE PARK	77*	955	989	768	649	18	135	7
63 FORDHAM UNIVERSITY	775I	533	706	2321	0	0	775I	0
64 UNIVERSITY OF CONNECTICUT	755	941	1,298	495	110	26	337	232
65 CREIGHTON UNIVERSITY	754I	665E	633	0	0	0	754I	0
66 INDIANA UNIV	702	1,127	1,418	1,650	108	272	243	79
67 HOWARD UNIVERSITY	693	210	268	190	2	0	537	4
68 UNIV OF ARK FAYETTEVILLE	692	285	353	225	428	0	0	264
69 UNIVERSITY OF FLORIDA	665E	733	120	237	32E	0	112E	521E
70 UTAH STATE UNIVERSITY	663	694	433	504	479	0	185	0
TOTAL, 1ST 70 INSTS.	148,727	125,418	104,118	100,061	36,316	17,604	45,346	49,461
71 MONTANA STATE UNIVERSITY	661	199	127	211	173	0	13	475
72 UNIV OF ALASKA FAIRBANKS	660	1,193	933	635	214	121	214	111
73 UNIVERSITY OF WYOMING	640	245	614	288	640	0	0	0
74 TEMPLE UNIVERSITY	633	739	789	720E	24	32	514	63
75 FLORIDA STATE UNIVERSITY	620	752	3,456I	3,233E	54	54	336	176
76 BOSTON UNIVERSITY	615	597	236	191	193	0	174	248
77 NORTHWESTERN UNIVERSITY	613	642	607	566	373	62	23	155
78 VA POLYTECH INST & ST U	60*	424	138E	129	593	0	16	0
79 UNIV OF MAINE ORONO	593	300	236	67	368	91	0	134
80 UNIV OF MASS AT AMHERST	582	361	649	559	12	51	519	0
TOTAL, 1ST 80 INSTS.	154,953	130,870	111,903	106,660	38,960	18,015	47,150	50,819
81 CLARK UNIVERSITY	555	653	524	416	0	0		555
82 SUNY AT STONY BROOK	543	672	1,420	382	47	205	15	276
83 WELLESLEY COLLEGE	537	0	-	0	0	10	527	0
84 CUNY GRAD SCH & UNIV CTR	525	561	561	697	0	91	378	56
85 UNIV OF ARK PINE BLUFF	521	0	-	37	0	0	521	0
86 UNIVERSITY OF OREGON MAIN	505	325	440	3,858	201	0	150	154
87 BROWN UNIVERSITY	505	550	472	612	180	75	250	0
88 UNIVERSITY OF VIRGINIA	487	240	403	529E	254	0	233	0
89 SOUTHERN METHODIST UNIV	467	431	313E	255	17	21	148	281
90 WASHINGTON STATE UNIV	456	714	29	312	9	32	415	0
TOTAL, 1ST 90 INSTS.	160,054	135,016	116,065	113,758	39,668	18,449	49,737	52,140
91 NORTH TEXAS STATE UNIV	454E	428	139	108	100E	25E	214E	115E
92 UNIVERSITY OF IDAHO	438	480	452	807	241	14	183	0
93 UNIV OF CAL SAN DIEGO	437	295	309	293	153	106	30	148
94 UNIV OF SOUTHWESTERN LA	427	438	624	-	0	0	0	427
95 WASHINGTON UNIVERSITY	426	222	215	283	99	40	16	272
96 UNIVERSITY OF TULSA	420	185	240	38	5	0	0	415
97 NORTHEASTERN UNIVERSITY	417I	367	250	271	206I	0	211I	0
98 UNIVERSITY OF NEW MEXICO	413	353	511	562	227	0	0	186
99 UNIV OF SOUTH FLORIDA	401	42	121	54	4	20	377	0
100 CALIFORNIA INST OF TECH	399	372	279	388	124	199	76	0
TOTAL, 1ST 100 INSTS.	164,286	138,198	119,205	116,562	40,826	18,853	50,934	53,703
TOTAL, ALL OTHER INSTS.	17,811	16,901	21,240	21,643	3,658	2,274	5,470	5,409

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-91. -- TOTAL AND FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC ACTIVITIES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1970 AND 1972-80 1/

(DOLLARS IN THOUSANDS)

FIELD	1970	1972	1973	1974	1975	1976	1977	1979	1980
ALL SOURCES, TOTAL	951,973	912,487	835,862	841,560	1,016,402	1,042,420	959,626	700,642	795,237
ENGINEERING	132,623	84,950	55,800	91,701	118,299	81,661	87,715	90,595	91,883
PHYSICAL SCIENCES	225,268	137,331	106,210	93,468	80,282	73,551	65,209	64,806	77,513
ENVIRONMENTAL SCIENCES 2/	-	27,187	26,739	24,588	35,278	49,155	28,052	24,054	34,136
MATHEMATICAL/COMPUTER SCIENCES	38,160	24,712	20,016	23,670	15,042	24,682	25,135	27,392	31,636
LIFE SCIENCES	418,472	517,941	488,705	495,078	668,715	706,888	642,473	430,325	459,556
PSYCHOLOGY	22,036	19,007	39,584	15,511	11,525	9,129	12,701	7,096	17,927
SOCIAL SCIENCES	62,049	59,993	61,215	59,329	49,659	44,020	31,742	21,033	34,971
OTHER SCIENCES, N.E.C.	53,265	41,366	37,593	38,215	37,602	53,334	66,599	35,341	47,535
FEDERAL SOURCES, TOTAL	279,316	236,836	224,651	225,681	270,082	206,758	195,462	166,425	151,628
ENGINEERING	38,263	21,082	13,547	42,702	64,019	20,200	17,219	21,929	21,440
PHYSICAL SCIENCES	53,107	27,592	24,496	20,721	18,862	19,179	21,894	32,428	22,717
ENVIRONMENTAL SCIENCES 2/	-	8,486	5,961	7,084	5,960	6,312	9,273	8,198	7,999
MATHEMATICAL/COMPUTER SCIENCES	9,536	4,341	3,022	4,257	2,584	2,052	1,892	3,010	5,680
LIFE SCIENCES	142,718	152,328	161,907	139,775	169,458	153,570	137,359	91,471	86,959
PSYCHOLOGY	4,848	3,663	5,119	2,536	2,245	1,967	2,398	1,767	2,029
SOCIAL SCIENCES	10,303	10,939	5,369	4,467	2,755	1,806	2,086	2,075	1,548
OTHER SCIENCES, N.E.C.	13,541	8,105	5,230	4,139	4,199	1,672	3,341	5,547	3,356
OTHER SOURCES, TOTAL	672,557	675,651	611,211	615,879	746,320	835,662	764,164	534,217	643,579
ENGINEERING	94,360	63,868	42,253	48,999	54,280	61,461	70,496	68,666	70,443
PHYSICAL SCIENCES	172,161	109,739	81,714	72,747	61,420	54,372	43,315	32,378	54,796
ENVIRONMENTAL SCIENCES 2/	-	18,701	20,778	17,504	29,318	42,843	18,779	15,856	26,137
MATHEMATICAL/COMPUTER SCIENCES	29,624	20,371	16,994	19,413	12,458	22,630	23,253	24,382	26,036
LIFE SCIENCES	275,756	365,613	326,798	355,303	499,257	553,318	505,104	338,854	372,697
PSYCHOLOGY	17,188	15,344	34,465	12,975	9,280	7,162	10,303	5,329	15,878
SOCIAL SCIENCES	51,746	49,054	55,846	54,862	46,934	42,214	29,656	18,958	33,423
OTHER SCIENCES, N.E.C.	42,724	33,261	32,363	34,076	33,403	51,662	63,258	29,794	44,179

1/ DATA WERE NOT COLLECTED IN 1978.
2/ NOT SEPARATELY AVAILABLE PRIOR TO 1972, INCLUDED IN PHYSICAL SCIENCES.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-92. -- CAPITAL EXPENDITURES FOR SCIENTIFIC ACTIVITIES AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	795,237	91,883	77,513	34,136	31,686	459,556	17,927	34,971	47,535
NEW ENGLAND	34,815	1,832	1,692	1,851	985	22,067	604	5,415	359
CONNECTICUT	15,473	585	514	113	398	9,195	351	4,309	5
MAINE	263	21	59	0	0	174	3	6	3
MASSACHUSETTS	17,313	903	884	1,665	546	11,884	165	1,070	196
NEW HAMPSHIRE	1,023	139	102	18	0	591	25	6	142
RHODE ISLAND	557	180	84	51	31	163	56	20	3
VERMONT	187	4	49	4	40	60	7	5	13
MIDDLE ATLANTIC	111,953	21,782	10,450	1,941	14,903	54,607	1,959	3,533	2,883
NEW JERSEY	17,756	2,012	1,214	333	8,459	3,721	965	924	128
NEW YORK	64,532	13,020	5,891	751	1,441	39,317	577	1,248	2,297
PENNSYLVANIA	29,673	6,750	3,345	757	5,003	11,569	417	1,361	463
EAST NORTH CENTRAL	188,935	17,197	22,695	6,529	4,970	101,469	6,965	13,176	13,935
ILLINOIS	39,101	2,698	8,887	672	333	21,642	435	1,019	3,415
INDIANA	32,619	3,846	3,148	379	355	7,467	4,888	10,326	2,030
MICHIGAN	26,954	5,879	2,606	643	875	15,269	629	967	85
OHIO	49,462	2,953	8,175	2,276	548	36,694	566	183	69
WISCONSIN	41,003	1,921	1,879	2,559	2,859	20,417	449	681	13,335
WEST NORTH CENTRAL	68,781	4,729	2,298	1,277	1,590	53,909	293	1,878	2,807
IOWA	18,692	1,026	685	238	83	14,704	35	1,296	627
KANSAS	12,223	998	616	247	1,393	8,567	162	135	165
MINNESOTA	22,997	1,577	382	11	150	18,770	14	89	2,036
MISSOURI	7,343	824	247	685	0	5,185	70	337	0
NEBRASKA	6,356	230	266	55	21	5,782	12	9	3
NORTH DAKOTA	544	46	108	11	11	376	0	21	3
SOUTH DAKOTA	631	28	14	30	11	517	0	12	29
SOUTH ATLANTIC	112,621	12,725	8,382	3,944	1,329	79,234	950	2,756	3,331
DELAWARE	3,864	56	0	2,220	0	6,588	0	0	0
DISTRICT OF COLUMBIA	6,397	485	715	18	172	3,784	45	1,170	8
FLORIDA	25,919	7,913	458	814	227	15,518	144	842	3
GEORGIA	12,053	2,794	590	186	270	4,504	459	390	2,940
MARYLAND	15,892	235	2,927	259	81	12,018	172	23	157
NORTH CAROLINA	27,965	785	3,197	370	398	22,960	95	34	106
SOUTH CAROLINA	7,653	0	242	83	97	7,298	2	21	9
VIRGINIA	5,886	74	159	211	52	5,525	22	25	7
WEST VIRGINIA	2,013	423	95	48	32	1,039	11	310	51
EAST SOUTH CENTRAL	33,733	1,484	815	93	813	27,209	56	176	54
ALABAMA	12,957	751	328	22	784	11,063	3	11	5
KENTUCKY	3,793	127	123	4	5	3,526	2	0	3
MISSISSIPPI	2,523	69	47	11	0	2,345	2	1	54
TENNESSEE	11,433	537	317	56	24	10,271	49	176	2
WEST SOUTH CENTRAL	99,215	7,220	10,070	2,979	6,644	67,106	5,008	1,813	375
ARKANSAS	2,403	249	193	10	280	1,430	21	57	155
LOUISIANA	14,739	1,000	538	800	1,915	9,116	662	300	178
OKLAHOMA	3,357	496	562	324	72	1,618	25	90	185
TEXAS	78,716	5,475	8,799	1,845	2,177	54,942	4,300	1,132	45
MOUNTAIN	32,909	9,602	3,719	5,754	498	10,796	260	322	1,950
ARIZONA	9,509	735	1,240	1,609	42	3,293	77	85	1,428
COLORADO	3,543	853	1,003	389	32	1,134	74	57	5
IDAHO	632	62	75	21	3	462	0	7	2
MONTANA	253	55	0	193	5	0	3	0	0
NEVADA	1,143	219	78	246	57	525	3	16	0
NEW MEXICO	9,195	5,761	430	66	56	1,257	95	11	519
UTAH	7,981	1,766	786	3,032	303	2,051	0	43	0
WYOMING	2,642	151	107	194	0	2,072	6	103	5
PACIFIC	113,495	14,944	17,311	9,809	2,142	41,993	3,829	5,864	17,604
ALASKA	2,145	0	0	2,131	0	0	0	0	15
CALIFORNIA	60,757	12,639	9,112	3,067	1,584	13,003	1,527	1,241	18,579
HAWAII	3,868	0	410	2,673	0	676	0	109	0
OREGON	11,072	93	4,341	602	11	5,971	27	17	14
WASHINGTON	35,652	2,212	3,448	1,336	557	22,331	274	3,497	997
OUTLYING AREAS	1,777	368	81	69	12	1,168	4	38	37

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-43. -- CAPITAL EXPENDITURES FOR SCIENTIFIC ACTIVITIES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	795,207	91,883	77,513	34,136	31,686	459,556	17,927	34,971	47,535
1 UNIV OF WIS-MADISON	22,996	609	1,177	1,660	2,049	14,088	149	179	3,085
2 UNIVERSITY OF MINNESOTA	22,639	1,576	244	0	0	18,733	2	79	2,004
3 UNIVERSITY OF WASHINGTON	22,111	1,217	2,535	577	102	13,564	113	3,774	229
4 UNIVERSITY OF FLORIDA	21,898I	7,387I	291I	82I	24I	13,927I	58I	38I	11
5 OHIO STATE UNIVERSITY	20,551	90	126	20	105	19,953	105	132	20
6 UNIVERSITY OF MICHIGAN	19,634	3,430	1,872	535	599	11,663	582	873	0
7 UNIV OF SOUTHERN CAL	18,704	6,210	3,266	1,720	261	5,104	1,291	852	0
8 U TEX MED BRNCH GALVESTON	17,630	0	0	0	0	17,630	0	0	0
9 INDIANA UNIV	16,994	798	798	285	197	4,409	222	10,166	139
10 EAST CAROLINA UNIVERSITY	14,319	0	91	28	0	14,223	0	8	9
TOTAL, 1ST 10 INSTS.	197,355	21,357	10,350	4,907	3,337	133,294	2,522	16,101	5,487
11 WASHINGTON STATE UNIV	12,232I	956I	791I	487I	289I	8,149I	105I	662I	767I
12 PURDUE UNIVERSITY	12,183	2,048	475	66	140	2,829	4,620	147	1,858
13 UNIVERSITY OF IOWA	12,062	127	538	134	0	11,263	0	0	0
14 SUNY AT STONY BROOK	11,993	0	478	0	0	10,507	0	393	615
15 COLUMBIA UNIV MAIN DIV	11,733I	238I	417I	71I	0	10,601I	0	406I	0
16 JOHNS HOPKINS UNIVERSITY	11,021	43I	345I	204I	1I	10,406I	10I	12I	0
17 UNIV OF TEXAS AT AUSTIN	10,511	749	5,020	582	147	3,912	43	58	0
18 MASS INST OF TECHNOLOGY	10,316	0	0	0	0	9,350	0	966	0
19 CARNEGIE-MELLON UNIV	10,273	2,659	1,025	199	3,608	2,204	100	420	139
20 CLEVELAND STATE UNIV	10,073	0	4,634	1,612	0	3,424	403	0	0
TOTAL, 1ST 20 INSTS.	309,719	28,123	24,073	8,262	7,522	205,935	7,803	19,165	8,836
21 YALE UNIVERSITY	9,278	36	0	0	155	5,255	0	3,832	0
22 NEW YORK UNIVERSITY	9,044	0	331	20	39	8,563	51	40	0
23 UNIV OF TEX CANCER CENTER	9,033	0	236	0	68	8,936	0	0	0
24 VANDERBILT UNIVERSITY	9,000E	0	0	0	0	9,000E	0	0	0
25 OREGON STATE UNIVERSITY	8,943	0	2,771	410	0	5,762	0	0	0
26 UNIVERSITY OF DELAWARE	8,864	36	0	2,220	0	6,598	0	0	0
27 U TEX HLTH SCI CTR S ANTO	8,674	0	0	0	0	8,674	0	0	0
28 STANFORD UNIVERSITY	8,595	3,163	1,511	369	799	2,623	116	14	0
29 CALIFORNIA INST OF TECH	8,056	2,395	3,566	924	99	953	0	119	0
30 BAYLOR COL OF MEDICINE	8,053	0	0	0	0	8,053	0	0	0
TOTAL, 1ST 30 INSTS.	397,264	33,773	32,388	12,205	8,682	270,240	7,970	23,170	8,836
31 UNIVERSITY OF CHICAGO	8,032	0	122	0	30	7,343	0	537	0
32 CORNELL UNIVERSITY	7,999	1,573	2,538	389	117	3,182	12	172	16
33 COL OF MED & DENT OF N J	7,801	0	0	0	7,801	0	0	0	0
34 PRINCETON UNIVERSITY	7,633	1,744	919	71	138	3,589	215	818	106
35 MED UNIV OF SO CAROLINA	7,177	0	0	0	0	7,177	0	0	0
36 UNIVERSITY OF ARIZONA	6,930	657	1,120	1,461	42	3,209	20	74	347
37 UNIV OF ILL URBANA	6,840	2,306	1,164	592	177	2,137	131	268	65
38 IOWA ST U OF SCI & TECH	6,532	899	119	94	75	3,410	22	1,297	626
39 UNIVERSITY OF UTAH	6,396	776	780	3,004	290	1,503	0	43	0
40 UNIV OF CAL IRVINE	6,335	0	0	0	0	0	0	0	6,335
TOTAL, 1ST 40 INSTS.	468,976	41,728	39,150	17,816	17,352	301,790	8,370	26,339	16,331
41 SOUTHERN ILL U-CARBONDALE	6,296	0	6,183	0	0	31	0	0	82
42 UNIV OF CAL LOS ANGELES	6,290	0	0	0	0	514	0	0	5,776
43 U HLTH SCI/CHCGO MED SCH	6,272I	0	0	0	0	6,272I	0	0	0
44 N C STATE UNIV AT RALEIGH	6,207	631	202	200	378	4,699	0	0	97
45 UNIVERSITY OF ROCHESTER	6,176I	3,595I	327I	0	118I	2,017I	45I	75I	49I
46 PENNSYLVANIA STATE UNIV	6,170	1,542	591	385	528	2,818	8	59	239
47 WASHINGTON UNIVERSITY	6,092	824	247	499	0	4,512	0	0	0
48 GEORGIA INSTITUTE OF TECH	6,066	2,638	274	0	168	28	6	12	2,940
49 SUNY AT BUFFALO	6,052	5,842	16	0	0	194	0	0	0
50 UNIVERSITY OF CONNECTICUT	5,933	547	412	113	221	3,818	349	473	0
TOTAL, 1ST 50 INSTS.	530,419	57,297	47,402	19,013	18,765	326,693	8,778	25,958	25,512

SEE FOOTNOTES AT END OF TABLE.

TABLE B-43. -- CAPITAL EXPENDITURES FOR SCIENTIFIC ACTIVITIES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 LOUISIANA STATE UNIV	5,745	639	426	607	125	3,923	11	44	0
52 RICE UNIVERSITY	5,623	2,449I	1,263I	900I	431I	631I	46I	400I	0
53 UNIVERSITY OF KANSAS	5,423I	350I	273I	130I	1,317I	3,052I	145I	106I	50I
54 UNIV ALABAMA BIRMINGHAM	5,215	14	150	0	12	5,039	0	0	0
55 U OF HOUSTON CENTRAL CAM	5,099	1,106	0	0	1	29	3,962	0	0
56 CASE WESTERN RESERVE UNIV	4,855	1,208	618	17	0	3,020	0	2	0
57 VA POLYTECH INST & ST U	4,831	0	0	3	0	4,828	0	0	0
58 WRIGHT STATE UNIVERSITY	4,817	888	0	0	0	3,929	0	0	0
59 MEDICAL COLLEGE OF WIS	4,802	0	0	0	0	4,802	0	0	0
60 KANS ST U - AG & APP SCI	4,633	520	265	75	22	3,623	11	19	95
TOTAL, 1ST 60 INSTS.	581,464	64,441	50,397	20,249	20,673	359,569	12,953	27,529	25,657
61 UNIVERSITY OF NEW ORLEANS	4,437	0	35	11	5	4,356	0	0	0
62 UNIV OF CAL SAN FRANCISCO	4,337	0	0	0	0	0	0	0	4,337
63 MICHIGAN STATE UNIVERSITY	4,152	165	495	77	85	3,163	32	60	85
64 TEXAS TECH UNIVERSITY	4,141	730	175	0	13	3,078	123	15	7
65 UNIV OF SOUTH ALABAMA	3,959	110	0	0	0	3,849	0	0	0
66 UNIV OF HAWAII-MANOA	3,868	0	410	2,673	0	676	0	109	0
67 UNIVERSITY OF PITTSBURGH	3,693	677	674	72	128	1,766	78	276	22
68 LOYOLA UNIV - CHICAGO	3,481I	0	529I	0	1I	173I	59I	0	2,719I
69 N MEX INST MINING & TECH	3,448	3,281	88	19	24	36	0	0	0
70 UNIVERSITY OF CINCINNATI	3,276	467	166	22	7	2,548	10	8	48
TOTAL, 1ST 70 INSTS.	620,236	69,871	52,969	23,119	20,936	379,214	13,255	27,997	32,875
71 UNIV OF MD COLLEGE PARK	3,215	192	2,482	34	67	328	105	7	0
72 UNIVERSITY OF GEORGIA	3,142	92	99	183	85	2,304	58	321	0
73 UNIV OF WIS-STOUT	3,103	0	6	0	0	2	4	106	2,985
74 TEMPLE UNIVERSITY	3,061	329	197	9	279	2,235	29	23	0
75 UNIVERSITY OF NOTRE DAME	2,920	970	1,817	5	1	73	27	1	26
76 HOWARD UNIVERSITY	2,912	18	389	0	0	2,505	0	0	0
77 OHIO UNIVERSITY	2,855	109	6	0	0	2,740	0	0	0
78 CAL POLY ST U SAN LUIS OB	2,922I	547I	60I	7I	29I	2,178I	0	1I	3
79 UNIVERSITY OF LOUISVILLE	2,762	124	0	0	0	2,638	0	0	0
80 NORTHWESTERN UNIVERSITY	2,747	292	437	12	0	1,169	95	218	544
TOTAL, 1ST 80 INSTS.	649,775	72,544	58,422	23,369	21,397	395,366	13,573	28,674	36,430
81 U OF NEB MED CTR AT OMAHA	2,692	0	0	0	0	2,692	0	0	0
82 NEW MEXICO STATE UNIV	2,692	1,946	173	40	32	384	88	0	19
83 DUKE UNIVERSITY	2,672	76	533	68	6	1,956	25	8	0
84 UNIVERSITY OF WYOMING	2,642	151	107	198	0	2,072	6	103	5
85 CREIGHTON UNIVERSITY	2,571I	0	7I	0	0	2,564I	0	0	0
86 UNIV OF WIS-MILWAUKEE	2,422	125	190	389	1	162	55	123	1,417
87 NC AG & TECH STATE UNIV	2,377I	0	2,316I	61I	0	0	0	0	0
88 MISSISSIPPI STATE UNIV	2,329	60	0	0	0	2,269	0	0	0
89 MICHIGAN TECH UNIVERSITY	2,272	1,910	129	16	86	108E	0	23	0
90 UNIV OF ALASKA FAIRBANKS	2,165	0	0	2,131	0	0	0	0	15
TOTAL, 1ST 90 INSTS.	674,593	76,812	61,837	26,272	21,522	407,573	13,747	28,931	37,886
91 WICHITA STATE UNIVERSITY	2,120	33	68	42	14	1,889	5	9	0
92 YESHIVA UNIVERSITY	2,103	0	0	0	0	2,103	0	0	0
93 CHICAGO COL OF OSTEO MED	2,088I	0	0	0	0	2,088I	0	0	0
94 UNIVERSITY OF MIAMI	2,015	193	47	366	5	1,389	11	2	2
95 UNIV OF PENNSYLVANIA	1,955	162	125	18	214	856	25	557	8
96 SOUTHERN U & A&M COLLEGE	1,875	109	0	39	1,721	6	0	0	0
97 U TEX HLTH SCI CTR DALLAS	1,854	0	0	0	0	1,854	0	0	0
98 WEST VIRGINIA UNIVERSITY	1,947	423	95	48	32	867	11	310	61
99 AUBURN UNIVERSITY	1,806	464	74	0	0	1,268	0	0	0
100 UNIVERSITY OF COLORADO	1,767	117	813	311	6	457	57	4	2
TOTAL, 1ST 100 INSTS.	694,923	78,373	63,059	27,096	23,514	420,350	13,856	29,813	37,959
TOTAL, ALL OTHER INSTS.	101,187	13,510	14,456	7,040	8,172	39,206	4,071	5,158	9,576

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DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 9-44. -- FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC ACTIVITIES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	151,629	21,440	22,717	7,999	5,680	86,859	2,029	1,548	3,356
1 JOHNS HOPKINS UNIVERSITY	9,057E	171	2531	1851	01	5,5931	101	91	0
2 STANFORD UNIVERSITY	6,236	2,054	1,365	57	407	2,242	103	8	0
3 OREGON STATE UNIVERSITY	5,497	0	0	0	0	5,497	0	0	0
4 UNIVERSITY OF MICHIGAN	5,451	1,209	961	200	352	2,064	361	304	0
5 CALIFORNIA INST OF TECH	5,291	1,437	2,760	709	0	381	0	4	0
6 CORNELL UNIVERSITY	5,194	1,145	2,263	347	75	1,282	4	25	3
7 UNIV OF SOUTHERN CAL	4,539	3,040	25	418	104	862	86	4	0
8 UNIVERSITY OF MINNESOTA	4,516	0	0	0	0	4,516	0	0	0
9 UNIV OF ILL URBANA	3,803	1,623	972	270	28	911	76	7	11
10 UNIVERSITY OF ARIZONA	3,253	233	652	372	10	1,948	2	27	104
TOTAL, 1ST 10 INSTS.	52,927	10,763	9,256	2,598	976	28,086	642	398	118
11 UNIVERSITY OF KANSAS	3,205I	211I	137I	41I	4I	2,728I	47I	37I	0I
12 UNIVERSITY OF WASHINGTON	2,695	121	96	320	35	2,051	31	8	33
13 MICHIGAN STATE UNIVERSITY	2,563	139	484	20	73	1,792	5	37	13
14 CREIGHTON UNIVERSITY	2,457I	0	0I	0	0	2,457I	0	0	0
15 YALE UNIVERSITY	2,457	0	0	0	0	2,457	0	0	0
16 UNIVERSITY OF CONNECTICUT	2,457	185	122	44	32	1,852	166	56	0
17 DUKE UNIVERSITY	2,451	58	498	48	5	1,799	25	8	0
18 UNIVERSITY OF FLORIDA	2,274I	814I	211I	4I	0I	1,213I	18I	13I	1I
19 MED UNIV OF SO CAROLINA	2,230	0	0	0	0	2,230	0	0	0
20 UNIV ALABAMA BIRMINGHAM	2,181	9	0	0	12	2,160	0	0	0
TOTAL, 1ST 20 INSTS.	77,797	12,310	10,804	3,075	1,137	48,925	934	547	165
21 WASHINGTON STATE UNIV	2,089I	153I	207I	78I	20I	1,568I	22I	18I	23I
22 UNIV OF MD COLLEGE PARK	2,067	170	1,668	34	1	82	105	7	0
23 UNIVERSITY OF ROCHESTER	1,971I	1,002I	242I	0	27I	658I	27I	0I	15I
24 HOWARD UNIVERSITY	1,908	0	0	0	0	1,908	0	0	0
25 CASE WESTERN RESERVE UNIV	1,883	551	387	16	0	929	0	0	0
26 SOUTHERN U & A&M COLLEGE	1,875	109	0	39	1,721	6	0	0	0
27 UNIVERSITY OF GEORGIA	1,854	17	78	124	75	1,410	25	125	0
28 PENNSYLVANIA STATE UNIV	1,765	542	367	142	2	649	2	2	59
29 UNIVERSITY OF PITTSBURGH	1,657	232	545	58	17	792	9	4I	0
30 UNIVERSITY OF COLORADO	1,650	94	777	300	0	420	53	4	2
TOTAL, 1ST 30 INSTS.	96,516	15,180	15,075	3,866	3,000	57,247	1,177	707	264
31 NORTHWESTERN UNIVERSITY	1,597	152	378	8	0	662	92	5	290
32 CARNEGIE-MELLON UNIV	1,585	479	466	5	255	322	28	28	3
33 UNIVERSITY OF UTAH	1,553	391	275	213	192	485	0	12	0
34 UNIV OF CAL SAN FRANCISCO	1,554	0	0	0	0	0	0	0	1,554
35 UNIV OF WIS-MADISON	1,390	8	515	35	9	614	38	15	156
36 PRINCETON UNIVERSITY	1,317	376	595	16	17	251	59	3	0
37 YESHIVA UNIVERSITY	1,242	0	0	0	0	1,242	0	0	0
38 UNIVERSITY OF DELAWARE	1,200	0	0	1,200	0	0	0	0	0
39 UNIVERSITY OF NEW MEXICO	1,184	325	159	2	0	683	6	9	0
40 BOSTON UNIVERSITY	1,126	1	66	0	3	954	4	10	88
TOTAL, 1ST 40 INSTS.	110,280	16,922	17,529	5,345	3,476	62,460	1,404	789	2,355
41 UNIVERSITY OF CINCINNATI	1,125	91	73	3	1	931	1	2	23
42 U TEX MED BRNCH GALVESTON	1,093	0	0	0	0	1,093	0	0	0
43 U TEX HLTH SCI CTR DALLAS	1,055	0	0	0	0	1,055	0	0	0
44 BAYLOR COL OF MEDICINE	1,062	0	0	0	0	1,062	0	0	0
45 GEORGIA INSTITUTE OF TECH	970E	422E	44E	0E	27E	4E	1E	2E	470E
46 NEW YORK UNIVERSITY	948	0	0	0	0	948	0	0	0
47 UNIV OF ALASKA FAIRBANKS	872	0	0	872	0	0	0	0	0
48 U TEX HLTH SCI CTR HOUSTN	838	0	0	4	816	0	0	19	0
49 OHIO STATE UNIVERSITY	801	0	0	0	0	801	0	0	0
50 LOUISIANA STATE UNIV	794	140	207	326	0	114	7	0	0
TOTAL, 1ST 50 INSTS.	119,853	17,575	17,853	6,550	4,320	68,498	1,413	811	2,848

SEE FOOTNOTES AT END OF TABLE.

TABLE B-49. -- FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC ACTIVITIES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 TEMPLE UNIVERSITY	795	0	85	0	0	694	6	0	0
52 IOWA ST U OF SCI & TECH	776	109	55	27	22	416	12	81	54
53 UNIV OF ILL MED CTR CHGO	715	0	0	0	0	715	0	0	0
54 UNIV OF SOUTHWESTERN LA	710	59	7	42	1	7	0	427	167
55 COL OF MED & DENT OF N J	699	0	0	0	699	0	0	0	0
56 UNIVERSITY OF NOTRE DAME	690	122	498	0	0	53	10	0	7
57 KANS ST U - AG & APP SCI	621	146	115	17	1	340	0	2	0
58 UNIVERSITY OF KENTUCKY	616	0	0	0	0	616I	0	0	0
59 INDIANA UNIV	593	12	35	15	0	513	5	7	3
60 TEXAS TECH UNIVERSITY	551	330	60	0	2	153	0	6	0
TOTAL, 1ST 60 INSTS.	126,621	19,353	19,708	6,651	5,045	72,005	1,446	1,334	3,079
61 THOMAS JEFFERSON UNIV	550E	0	0	0	0	550E	0	0	0
62 TULANE UNIVERSITY	515	39	15	0	11	433	17	0	0
63 UNIV OF CAL LOS ANGELES	514	0	0	0	C	514	0	0	0
64 RENSSELAER POLYTECH INST	512	401	96	0	1	12	1	0	1
65 UNIV OF TEX CANCER CENTER	511	0	0	0	0	511	0	0	0
66 U OF MD EASTERN SHORE	511I	0	71	21I	0	432I	47I	4I	0
67 DARTMOUTH COLLEGE	509	15	46	12	0	422	13	0	0
68 GEORGETOWN UNIVERSITY	501	0	0	0	0	501	0	0	0
69 N C STATE UNIV AT RALEIGH	501	0	0	0	0	501	0	0	0
70 WEST VIRGINIA UNIVERSITY	497	126	12	44	8	303	0	4	0
TOTAL, 1ST 70 INSTS.	131,741	18,934	18,884	6,728	5,065	76,184	1,524	1,342	3,080
71 U TEX HLTH SCI CTR S ANTO	489	0	0	0	0	489	0	C	0
72 MEDICAL COLLEGE OF WIS	483	0	0	0	0	483	0	0	0
73 ST LOUIS UNIVERSITY	479E	0	0	154	0	325	0	0	0
74 DREXEL UNIVERSITY	476	123	318	0	0	14	0	0	21
75 UNIV OF MD BALT PROF SCH	470	0	0	0	0	470	0	0	0
76 NORTHEASTERN UNIVERSITY	466I	36I	332I	0	0I	49I	47I	2I	0I
77 WAKE FOREST UNIVERSITY	466I	0	0I	0	0	446I	20I	0	0
78 BROWN UNIVERSITY	449I	151I	56I	46I	0I	126I	52I	8I	0
79 OKLAHOMA STATE UNIVERSITY	439I	29I	46I	7I	3I	352I	0	2I	0
80 SUNY DOWNSTATE MED CTR	412	0	0	0	0	412	0	0	0
TOTAL, 1ST 80 INSTS.	136,370	19,283	19,636	6,935	5,068	79,350	1,643	1,354	3,101
81 ARIZONA STATE UNIVERSITY	405	43	110	110	0	83	57	2	0
82 AUBURN UNIVERSITY	389	151	31	0	0	207	0	0	0
83 UNIVERSITY OF WYOMING	382	70	81	128	0	97	6	0	0
84 UNIV OF OKLAHOMA NORMAN	353	133	87	74	0	36	17	11	0
85 SYRACUSE UNIVERSITY	356	87	50	76	3	69	3	9	59
86 UNIV OF ARK FAYETTEVILLE	353	27	57	0	0	266	0	3	0
87 RUSH UNIVERSITY	340	0	0	0	0	336	4	0	0
88 GEORGE WASHINGTON UNIV	337	15	1	10	122	173	10	0	6
89 U OF NEB MED CTR AT OMAHA	332	0	0	0	0	332	0	0	0
90 CATHOLIC UNIV OF AMERICA	314	19	250	0	0	10	27	8	0
TOTAL, 1ST 90 INSTS.	139,936	19,828	20,303	7,333	5,193	80,959	1,767	1,387	3,166
91 UNIV OF NEVADA - RENO	299	92	29	0	19	169	0	0	0
92 CHICAGO COL OF OSTEO MED	271I	0	0	0	0	271I	0	0	0
93 UNIV TENN CTR HEALTH SCI	269I	0	0	0	0	269I	0	0	0
94 ATLANTA UNIVERSITY	257	0	100	0	14	143	0	0	0
95 THE MEDICAL COL OF PENNA	255	0	0	0	0	255	0	0	0
96 HAHNEMANN MED COL & HOSP	250E	0	0	0	0	250E	0	0	0
97 UNIVERSITY OF IDAHO	236	22	89	15	0	128	0	2	0
98 U MASS MED SCHL WORCESTER	230I	0	0	0	0	230I	0	0	0
99 SOUTH DAKOTA STATE UNIV	221	12	5	6	0	192	0	1	5
100 CUNY CITY COLLEGE	220	14	16C	0	15	29	C	0	0
TOTAL, 1ST 100 INSTS.	142,444	19,958	20,668	7,354	5,241	82,895	1,767	1,390	3,171
TOTAL, ALL OTHER INSTS.	9,194	1,492	2,049	645	439	3,964	262	158	185

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-45. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1972-80

SOURCE, CHARACTER, AND FIELD	1972	1973	1974	1975	1976	1977	1978 1/	1979	1980
TOTAL NON-FEDERAL	835,397	898,572	990,438	1,120,546	1,215,629	1,340,092	1,564,133	1,760,052	1,956,756
SOURCE OF FUNDS:									
STATE AND LOCAL GOVERNMENTS	259,582	294,572	306,881	331,612	363,017	373,213	413,588	468,976	492,310
INDUSTRY	74,413	83,968	95,953	112,952	123,134	138,788	169,605	192,745	235,511
INSTITUTIONAL FUNDS	304,789	318,289	369,689	417,391	444,972	513,559	621,871	725,063	820,940
ALL OTHER SOURCES	186,613	201 743	217,915	258,591	284,506	314,532	359,069	373,268	407,995
CHARACTER OF WORK:									
BASIC RESEARCH	631,986	599,224	630,837	714,421	706,533	792,548	-	1,036,392	1,169,034
APPLIED RESEARCH AND DEVELOPMENT	233,411	299,348	359,601	406,125	509,096	547,544	-	723,660	787,672
FIELD:									
ENGINEERING 2/	38,486	94,990	107,559	121,559	141,209	161,748	193,575	241,433	268,053
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	-	-	-	-	11,193
CHEMICAL	-	-	-	-	-	-	-	-	19,536
CIVIL	-	-	-	-	-	-	-	-	27,497
ELECTRICAL	-	-	-	-	-	-	-	-	45,140
MECHANICAL	-	-	-	-	-	-	-	-	46,875
OTHER, N.E.C.	-	-	-	-	-	-	-	-	117 012
PHYSICAL SCIENCES	53,212	59,894	63,268	65,283	73,969	85,637	104,053	112,150	124,326
ASTRONOMY	5,144	6,417	7,326	7,085	7,943	9,131	10,433	12,159	14,312
CHEMISTRY	25,559	27,127	27,074	27,991	32,272	38,862	45,130	50,724	56,251
PHYSICS	22,771	21,588	22,725	23,648	26,948	29,745	35,938	39,433	42,234
OTHER, N.E.C.	9,739	4,762	6,143	6,559	6,806	7,899	12,552	9,834	11,459
ENVIRONMENTAL SCIENCES 2/	50,302	51,834	66,577	74,417	75,312	79,267	102,754	121,878	134,650
ATMOSPHERIC	-	-	-	-	-	-	-	-	12,384
EARTH SCIENCES	-	-	-	-	-	-	-	-	57,476
OCEANOGRAPHY	-	-	-	-	-	-	-	-	34,690
OTHER, N.E.C.	-	-	-	-	-	-	-	-	30,030
MATHEMATICAL/COMPUTER SCIENCES	17,384	19,056	18,602	20,207	21,187	29 690	40,834	46,350	53,963
MATHEMATICS 3/	-	8,328	8,111	8,489	9,609	11,673	14,626	17,954	17,328
COMPUTER SCIENCES 3/	-	10,728	10,491	11,718	11,578	18,017	26,208	28,396	36,615
LIFE SCIENCES	466,211	515,223	578,970	662,946	720,844	784,820	911,342	1,010,548	1,118,851
AGRICULTURAL SCIENCES	148,766	182,497	246,097	270,97	290,329	327,875	352,592	403,431	450,770
BIOLOGICAL SCIENCES	131,476	158,048	144,509	173,070	188,547	197,159	231,731	261,535	278,247
MEDICAL SCIENCES	156,481	159,664	172,417	197,667	219,867	238,580	302,432	321,127	358,353
OTHER, N.E.C.	29,488	15,014	15,947	21,242	22,101	21,206	24,587	24,455	31,471
PSYCHOLOGY	15,633	15,142	15,689	18,636	18,516	21,481	25,668	28,132	29,983
SOCIAL SCIENCES	91,57	98,695	103,793	114,750	123,983	129,827	137,052	139,523	159,353
ECONOMICS	25,346	24,945	25,468	28,960	36,307	40,454	42,026	45,787	49,933
POLITICAL SCIENCE	13,009	15,141	15,123	17,101	16,386	17,388	20,683	21,614	28,034
SOCIOLOGY	23,539	21,034	22,171	23,708	25,124	24,068	26,303	26,790	30,937
OTHER, N.E.C.	29,615	37,575	41,031	44,981	46,166	47,877	48,040	45,332	50,399
OTHER SCIENCES, N.E.C.	42,592	43,738	35,980	42,738	40,609	47,622	48,855	60,038	67,597

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
3/ NOT SEPARATELY AVAILABLE PRIOR TO 1973.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-96. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1979 AND 1980

SOURCE, CHARACTER, AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1979	1980	PERCENT CHANGE 1979-80	1979	1980	PERCENT CHANGE 1979-80	1979	1980	PERCENT CHANGE 1979-80
TOTAL NON-FEDERAL	1,760,052	1,956,756	11.2	1,324,277	1,480,234	11.8	435,775	476,522	9.4
SOURCE OF FUNDS:									
STATE AND LOCAL GOVERNMENTS	468,976	492,310	5.0	422,122	448,742	6.3	46,854	43,568	-7.0
INDUSTRY	192,745	235,511	22.2	112,322	141,651	26.1	80,423	93,860	16.7
INSTITUTIONAL FUNDS	725,063	820,940	13.2	578,189	654,906	13.3	146,874	166,134	13.1
ALL OTHER SOURCES	373,268	407,995	9.3	211,644	235,035	11.1	161,624	172,960	7.0
CHARACTER OF WORK:									
BASIC RESEARCH	1,036,392	1,169,084	12.8	738,593	810,494	9.7	297,799	358,590	20.4
APPLIED RESEARCH AND DEVELOPMENT	723,660	787,672	8.8	585,684	669,740	14.4	137,976	117,932	-14.5
FIELD:									
ENGINEERING 1/	241,433	268,053	11.0	177,327	196,720	10.9	64,106	71,333	11.3
AERONAUTICAL AND ASTRONAUTICAL	-1	11,193	-	-1	6,379	-	-1	4,814	-
CHEMICAL	-1	19,536	-	-1	14,623	-	-1	4,913	-
CIVIL	-1	27,497	-	-1	21,873	-	-1	5,624	-
ELECTRICAL	-1	45,140	-	-1	31,059	-	-1	14,081	-
MECHANICAL	-1	46,875	-	-1	26,197	-	-1	20,678	-
OTHER, N.E.C.	-1	117,812	-	-1	96,589	-	-1	21,223	-
PHYSICAL SCIENCES	112,150	124,326	10.9	76,183	86,725	13.8	35,967	37,601	4.5
ASTRONOMY	12,159	14,312	17.7	9,222	9,949	7.9	2,937	4,363	48.6
CHEMISTRY	50,724	56,261	10.9	35,517	38,754	9.1	15,207	17,507	15.1
PHYSICS	39,433	42,284	7.2	24,445	29,235	19.6	14,988	13,049	-12.9
OTHER, N.E.C.	9,834	11,469	16.6	6,999	8,787	25.5	2,835	2,682	-5.4
ENVIRONMENTAL SCIENCES 1/	121,878	134,650	10.5	104,877	112,059	6.8	17,001	22,591	32.9
ATMOSPHERIC	-1	12,384	-	-1	10,389	-	-1	1,995	-
EARTH SCIENCES	-1	57,496	-	-1	51,282	-	-1	6,214	-
OCEANOGRAPHY	-1	34,690	-	-1	28,105	-	-1	6,585	-
OTHER, N.E.C.	-1	30,080	-	-1	22,283	-	-1	7,797	-
MATHEMATICAL/COMPUTER SCIENCES	46,350	53,943	16.4	32,977	38,043	15.4	13,373	15,900	18.9
MATHEMATICS	17,954	17,328	-3.5	12,989	11,718	-9.8	4,955	5,610	13.2
COMPUTER SCIENCES	28,396	36,615	28.9	19,988	26,325	31.7	8,408	10,290	22.4
LIFE SCIENCES	1,010,548	1,118,851	10.7	760,932	856,193	12.5	249,616	262,658	5.2
AGRICULTURAL SCIENCES	403,431	450,770	11.7	390,338	436,576	11.8	13,093	14,194	8.4
BIOLOGICAL SCIENCES	261,535	278,247	6.4	171,744	186,038	8.3	89,791	92,209	2.7
MEDICAL SCIENCES	321,127	358,363	11.6	184,042	214,891	16.8	137,085	143,472	4.7
OTHER, N.E.C.	24,455	31,471	28.7	14,808	18,688	26.2	9,647	12,783	32.5
PSYCHOLOGY	28,132	29,983	6.6	19,232	19,709	2.5	8,900	10,274	15.4
SOCIAL SCIENCES	139,523	159,353	14.2	105,138	117,446	11.7	34,395	41,907	21.9
ECONOMICS	45,787	49,933	9.1	35,979	39,175	8.9	9,808	10,758	9.7
POLITICAL SCIENCE	21,614	28,034	29.7	15,593	18,995	21.8	6,021	9,039	50.1
SOCIOLOGY	26,790	30,987	15.7	22,208	25,339	14.1	4,582	5,648	23.3
OTHER, N.E.C.	45,332	50,399	11.2	31,358	33,937	8.2	13,974	16,462	17.8
OTHER SCIENCES, N.E.C.	60,038	67,597	12.6	47,611	53,339	12.0	12,427	14,258	14.7

1/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-47. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1980)	TOTAL 1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	1,956,756	1,760,052	1,564,133	1,339,826
1 UNIVERSITY OF MINNESOTA	50,602	44,927	41,441	34,270
2 UNIV OF WIS-MADISON	48,877	44,143	39,069	36,574
3 TEXAS A & M UNIVERSITY	39,601	35,144	34,471	30,053
4 UNIVERSITY OF GEORGIA	37,642	34,609	31,108	23,625
5 MICHIGAN STATE UNIVERSITY	37,524	34,839	30,899	25,110
6 LOUISIANA STATE UNIV	37,190	31,785	31,081	20,366
7 CORNELL UNIVERSITY	37,028	33,294	28,650	25,334
8 UNIVERSITY OF MICHIGAN	35,787	39,639	28,450	29,014
9 UNIVERSITY OF ARIZONA	33,536	26,714	22,046	16,798
10 UNIV OF CAL DAVIS	33,351	27,850	25,957	23,147
TOTAL, 1ST 10 INSTS.	391,118	352,944	313,172	264,271
11 UNIVERSITY OF FLORIDA	33,029E	22,790	26,565	27,804
12 IOWA ST U OF SCI & TECH	32,640	30,538	27,063	24,495
13 UNIV OF ILL URBANA	30,947	31,302	31,831	18,762
14 OHIO STATE UNIVERSITY	30,097	27,566	24,076	20,808
15 UNIV OF TEXAS AT AUSTIN	29,955	24,034	20,633	19,581
16 N C STATE UNIV AT RALEIGH	27,114	26,810	22,108	19,500
17 PENNSYLVANIA STATE UNIV	26,839	23,195	22,043	18,779
18 UNIV OF CAL BERKELEY	26,250	21,824	20,516	19,951
19 MASS INST OF TECHNOLOGY	25,166	20,625	17,489	16,979
20 HARVARD UNIVERSITY	24,524E	21,634E	20,463E	17,816
TOTAL, 1ST 20 INSTS.	677,679	603,262	545,959	468,764
21 UNIV OF SOUTHERN CAL	24,303	25,138	12,778	4,337
22 GEORGIA INSTITUTE OF TECH	23,826	19,011	15,605	12,584
23 PURDUE UNIVERSITY	23,724	21,604	17,990	16,867
24 UNIV OF PENNSYLVANIA	23,645	23,020	24,094	23,408
25 UNIV OF NEBRASKA-LINCOLN	22,227	22,972	17,481	16,801
26 UNIVERSITY OF ROCHESTER	21,955	21,024	18,151	19,627
27 UNIV OF MISSOURI COLUMBIA	21,017	20,576	18,915	18,109
28 MISSISSIPPI STATE UNIV	20,211	18,609	15,426	13,182
29 RUTGERS THE ST UNIV OF NJ	20,176	18,773	17,002	14,717
30 OREGON STATE UNIVERSITY	20,044	18,149	15,707	13,525
TOTAL, 1ST 30 INSTS.	898,807	802,138	719,008	621,923
31 WASHINGTON STATE UNIV	19,683	15,244	13,315	14,300
32 KANS ST U - AG & APP SCI	19,116	17,070	15,111	11,660
33 ROCKEFELLER UNIVERSITY	18,799	18,346	17,187	16,254
34 UNIVERSITY OF WASHINGTON	18,749	15,691	14,087	11,691
35 UNIV OF CAL LOS ANGELES	18,569	15,394	14,288	13,321
36 UNIV OF ARK FAYETTEVILLE	18,224	18,146	11,863	6,984
37 COLUMBIA UNIV MAIN DIV	17,678	15,819	14,757	13,975
38 VA POLYTECH INST & ST U	17,224	15,545	14,649	11,920
39 UNIVERSITY OF KENTUCKY	16,920	17,040	9,693	13,303
40 UNIV OF MD COLLEGE PARK	16,793	12,269	11,980	10,760
TOTAL, 1ST 40 INSTS.	1,080,512	962,702	855,938	746,091
41 UNIVERSITY OF CONNECTICUT	16,738	15,026	13,329	13,940
42 UNIV OF TEX CANCER CENTER	16,449	15,007	12,641	11,327
43 UNIV OF CAL RIVERSIDE	16,099	14,112	13,469	11,551
44 UNIV OF ALASKA FAIRBANKS	15,567	11,516	12,776	10,511
45 UNIV OF HAWAII-MANOA	14,766	13,203	12,190	10,955
46 UNIV OF CAL SAN DIEGO	13,792	11,375	11,398	8,917
47 UNIVERSITY OF COLORADO	13,424	11,909	9,695	8,087
48 JOHNS HOPKINS UNIVERSITY	13,349	13,509E	11,472	11,413
49 AUBURN UNIVERSITY	13,279	14,423	10,801	10,277
50 NEW YORK UNIVERSITY	13,034	13,542	14,086	10,080
TOTAL, 1ST 50 INSTS.	1,227,003	1,096,324	977,795	853,149

SEE FOOTNOTES AT END OF TABLE.

TABLE B-47. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80 - CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1980)	TOTAL 1980	1979	1978	1977
51 FLORIDA STATE UNIVERSITY	12,996	9,357	7,300E	7,614
52 UNIVERSITY OF CINCINNATI	12,950	11,495	15,187	13,433
53 CLEMSON UNIVERSITY	12,519	12,184	10,181	8,417
54 OKLAHOMA STATE UNIVERSITY	12,310	15,064	11,433	10,444
55 UNIV OF CAL SAN FRANCISCO	12,254	9,868	9,844	8,457
56 COLORADO STATE UNIVERSITY	12,190	11,375	9,607	8,624
57 UNIVERSITY OF MIAMI	12,182	11,159	11,872	7,640
58 WASHINGTON UNIVERSITY	11,623	11,232	9,955	5,293
59 YESHIVA UNIVERSITY	11,126	6,580	4,670	2,578E
60 CASE WESTERN RESERVE UNIV	10,967	10,245	8,294	7,771
TOTAL, 1ST 60 INSTS.	1,348,120	1,204,883	1,076,132	933,420
61 NORTHWESTERN UNIVERSITY	10,646	9,671	7,082	5,390
62 STANFORD UNIVERSITY	10,475	10,170	9,492	5,904
63 NORTH DAKOTA STATE UNIV	10,091	8,185	7,583	7,189
64 UTAH STATE UNIVERSITY	9,792	6,649	5,919	4,403
65 CARNEGIE-MELLON UNIV	9,663	8,797	8,766	6,807
66 INST OF AGRI UNIV OF TENN	8,833I	7,808I	6,928	5,454
67 WAYNE STATE UNIVERSITY	8,622	7,583	7,615	4,213
68 UNIVERSITY OF PITTSBURGH	8,536	8,301	8,425	5,672
69 UNIV OF MAINE OPOND	8,514	5,793	5,630	5,591
70 UNIVERSITY OF CHICAGO	8,318	13,297	13,908	13,223
TOTAL, 1ST 70 INSTS.	1,441,610	1,290,137	1,157,480	997,266
71 WEST VIRGINIA UNIVERSITY	8,285	6,574	4,565	5,182
72 UNIV OF OKLAHOMA NORMAN	8,171	3,534	2,822	992
73 INDIANA UNIV	8,029	6,484	5,709	4,202
74 GEORGETOWN UNIVERSITY	7,944	6,359	5,278	6,527
75 SYRACUSE UNIVERSITY	7,891	5,760	5,198	996
76 ST JOHN'S UNIVERSITY (NY)	7,883	7,527	6,955	6,046
77 YALE UNIVERSITY	7,874	9,026	6,309	5,650
78 SUNY AT BUFFALO	7,773	7,530	7,351	3,223
79 SUNY AT STONY BROOK	7,723	6,766	5,961	2,623
80 UNIVERSITY OF DELAWARE	7,566	6,24A	4,788	4,381
TOTAL, 1ST 80 INSTS.	1,520,749	1,355,943	1,212,316	1,037,088
81 UNIV OF NC AT CHAPEL HILL	7,344	6,530	6,083	5,835
82 UNIVERSITY OF IDAHO	7,319	7,121	7,387	8,517
83 UNIV OF P R-MAYAGUEZ	7,273	6,672	7,097E	6,777E
84 MONTANA STATE UNIVERSITY	7,233	7,358	6,553	5,420
85 PRINCETON UNIVERSITY	6,926	6,891	5,447	6,563
86 UNIV OF MASS AT AMHERST	6,753	7,723	6,505	6,232
87 BAYLOR COL OF MEDICINE	6,697	7,372	6,101	2,292
88 TEXAS TECH UNIVERSITY	6,669	6,458	5,493	3,949
89 U OF HOUSTON CENTRAL CAM	6,474	6,604	3,582I	3,103
90 ALBANY MEDICAL COLLEGE	6,069	4,787	2,780	4,231
TOTAL, 1ST 90 INSTS.	1,589,506	1,423,459	1,269,344	1,090,007
91 UNIV ALABAMA BIRMINGHAM	5,788	4,682	2,733	2,374
92 U TEX HLTH SCI CTR DALLAS	5,715	4,741	4,046	3,372
93 U TEX MED BRNCH GALVESTON	5,654	5,133	4,281	4,639
94 RENSSELAER POLYTECH INST	5,632	3,254	2,211	1,768
95 UNIVERSITY OF UTAH	5,587	5,660	5,641	7,236
96 CUNY MT SINAI SCH OF MED	5,536	5,244	5,078	3,272
97 MICHIGAN TECH UNIVERSITY	5,290	4,314	3,869	3,305
98 UNIVERSITY OF IOWA	5,263	5,889	5,977	4,771
99 UNIVERSITY OF NEW MEXICO	5,218	5,279	5,496	3,948
100 CALIFORNIA INST OF TECH	4,929	4,394	3,448	4,776
TOTAL, 1ST 100 INSTS.	1,644,118	1,475,049	1,312,724	1,129,468

SEE FOOTNOTES AT END OF TABLE.

TABLE B-47. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80 - CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1980)	TOTAL 1980	1979	1978	1977
101 TEMPLE UNIVERSITY	4,927	4,367	4,311	4,542
102 U OF CAL SYS WIDE PRGMS	4,912	3,737	4,124	3,594
103 UNIVERSITY OF WYOMING	4,816	3,970	4,005	3,822
104 SOUTH DAKOTA STATE UNIV	4,759	4,341	4,327	3,821
105 TULANE UNIVERSITY	4,436	4,197	4,036	4,162
106 UNIV OF NEVADA - RENO	4,325	3,702	3,841	3,216
107 UNIV OF ILL MED CTR CHGO	4,315	3,098	2,938	2,298
108 LEHIGH UNIVERSITY	4,282	4,091	3,858	3,428
109 WOODS HOLE OCNGRPHIC INST	4,167	3,290	3,491	2,681
110 VANDERBILT UNIVERSITY	4,072	3,669	3,464	2,731
TOTAL, 1ST 110 INSTS.	1,689,129	1,513,511	1,351,119	1,163,763
111 UNIV OF VT & ST AGRIC COL	4,045	3,800	3,478	3,289
112 UNIV OREGON HLTH SCI CTR	4,018	1,940E	1,971I	1,665
113 SUNY COL OF ENV SCI & FOR	4,013	4,332	4,195	1,327
114 MEDICAL COLLEGE OF WIS	3,991	3,243	2,753	1,596
115 UNIVERSITY OF DENVER	3,957	3,980	1,711	2,154
116 UNIV OF NEW HAMPSHIRE	3,923	3,811	4,250	3,527
117 NEW MEXICO STATE UNIV	3,900	3,144	1,851E	1,530
118 U TEX HLTH SCI CTR S ANTO	3,814	3,383	3,117	1,289
119 UNIVERSITY OF MISSISSIPPI	3,755	3,263E	2,993	1,105
120 UNIVERSITY OF VIRGINIA	3,6[illegible]	2,985	2,537	3,987E
TOTAL, 1ST 120 INSTS.	1,728,236	1,547,392	1,379,975	1,185,232
121 INSTITUTE PAPER CHEMISTRY	3,616E	3,430	3,069	2,380
122 U TENNESSEE KNOXVILLE	3,573E	3,573	3,330	1,177
123 SOUTHERN ILL U-CARBONDALE	3,545	3,226	2,557	2,167
124 HOWARD UNIVERSITY	3,486	1,500	2,028	508
125 VIRGINIA COMMONWLTH UNIV	3,444	2,854	2,261	2,320
126 SUNY DOWNSTATE MED CTR	3,441	2,605	2,149	2,193
127 UNIV OF MISSOURI ROLLA	3,357	2,933	2,885	2,548
128 UNIV OF WIS-MILWAUKEE	3,324	3,667	3,279	3,110
129 COL OF MED & DENT OF N J	3,299	3,560	2,376	737
130 UNIV OF ILL CHICAGO CIR	3,196	2,706	1,181	1,274
TOTAL, 1ST 130 INSTS.	1,762,517	1,577,446	1,405,090	1,203,646
131 UNIVERSITY OF KANSAS	3,193	7,806I	6,919	5,635
132 UNIV OF CAL IRVINE	3,092	2,994	2,367	2,253
133 UNIV OF RHODE ISLAND	3,085E	2,857	945I	307
134 UNIV OF MO CENTRAL OFF	3,072	2,727	2,713	2,672
135 DUKE UNIVERSITY	2,901	5,168	5,227	3,225
136 UNIV OF CAL SANTA BARBARA	2,889	2,457	1,751	1,279
137 DESERT RESEARCH INSTITUTE	2,839	3,218	2,432	1,257
138 UNIV OF CENTRAL FLORIDA	2,729	867	-	1,623
139 UNIV OF OKLA HLTH SCI CTR	2,667	973	934	-
140 NORTHERN ILLINOIS UNIV	2,665	2,136	213	510I
TOTAL, 1ST 140 INSTS.	1,791,649	1,608,649	1,428,091	1,222,407
141 RUSH UNIVERSITY	2,620	2,386	2,076	879
142 GALLAUDET COLLEGE	2,589E	1,974I	-	1,604
143 BROWN UNIVERSITY	2,575	2,221	1,929	1,865
144 U TEX HLTH SCI CTR HOUSTN	2,529	1,839	1,793	1,521
145 BRIGHAM YOUNG UNIVERSITY	2,481E	2,298	2,177	2,413
146 OLD DOMINION U RES FDN	2,460E	121	224	134
147 UNIV OF WEST FLORIDA	2,366	1,365	-	1,483
148 SUNY UPSTATE MEDICAL CTR	2,316E	2,144	1,920I	1,653
149 UNIVERSITY OF LOUISVILLE	2,305	3,003	3,808	2,230
150 N MEX INST MINING & TECH	2,301	1,810	1,001	492
TOTAL, 1ST 150 INSTS.	1,816,191	1,627,810	1,443,029	1,236,681

SEE FOOTNOTES AT END OF TABLE.

TABLE B-47. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1977-80 - CONTINUED

(DOLLARS IN THOUSANDS)

	INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1980)	TOTAL 1980	1979	1978	1977
151	POLYTECHNIC INST OF N Y	2,230E	2,088	1,676	1,419
152	U OF NEB MED CTR AT OMAHA	2,206	2,219	1,936	1,788
153	NEW YORK INST TECHNOLOGY	2,197	2,220	-	755
154	GEORGE WASHINGTON UNIV	2,181	2,685	2,192	1,486
155	EMORY UNIVERSITY	2,167	1,674	1,490	1,182
156	BOSTON UNIVERSITY	2,155	2,140	1,994	1,858
157	UNIV OF CAL SANTA CRUZ	2,021	1,843	1,874	1,538
158	UNIV OF SOUTH FLORIDA	2,012	1,800	1,647	2,111
159	RICE UNIVERSITY	1,845	1,549I	1,382	1,259
160	MED UNIV OF SO CAROLINA	1,841	810	1,244	1,176
	TOTAL, 1ST 160 INSTS.	1,837,046	1,646,838	1,458,454	1,251,253
161	UNIV OF TEXAS AT DALLAS	1,815	1,456	983	-
162	THOMAS JEFFERSON UNIV	1,793E	1,740	1,515	1,413
163	UNIVERSITY OF NEW ORLEANS	1,787	1,470	1,274	765
164	UNIV OF MD BALT PROF SCH	1,786	1,148	1,171	1,677
165	UNIV OF SOUTH CAROLINA	1,755E	1,688	1,029I	885
166	TUFTS UNIVERSITY	1,724	2,575E	2,482I	2,168
167	UNIVERSITY OF DAYTON	1,690	2,214	1,594	1,180
168	CALIF ST COL STANISLAUS	1,684	82	-	22
169	STEVENS INSTITUTE OF TECH	1,670	1,574	1,803	1,346
170	WORCESTER POLY INSTITUTE	1,661	2,221	1,959	1,897
	TOTAL, 1ST 170 INSTS.	1,854,391	1,663,006	1,472,164	1,262,606
171	OHIO UNIVERSITY	1,587	1,132	342	243
172	WRIGHT STATE UNIVERSITY	1,558	1,560	2,631	331
173	ST LOUIS UNIVERSITY	1,556E	1,556	621E	1,706I
174	SUNY AT ALBANY	1,505E	1,474	1,328	922
175	N J INST OF TECHNOLOGY	1,503	784	675	336
176	NORTH TEXAS STATE UNIV	1,486E	1,448	1,419	1,126
177	UNIV OF ARK PINE BLUFF	1,458	1,379	-	1,228
178	MED COL OF OHIO AT TOLEDO	1,437	945	825	828
179	UNIVERSITY OF REDLANDS	1,416I	1,264	-	0
180	DREXEL UNIVERSITY	1,407	1,113	1,638	840
	TOTAL, 1ST 180 INSTS.	1,869,304	1,675,661	1,481,643	1,270,166
181	WICHITA STATE UNIVERSITY	1,395	954	642	619
182	UNIVERSITY OF MONTANA	1,359	2,232	1,166	1,096
183	UNIV TEXN CTR HEALTH SCI	1,347	1,717	1,244	1,226
184	OREGON GRADUATE CENTER	1,340	1,558	1,963	-
185	U MASS MED SCHL WORCESTER	1,272	1,374	1,093	846
186	UNIV OF P R-RIO PIEDRAS	1,247I	1,103I	979	810
187	SUNY AT BINGHAMTON	1,240	929	529	560
188	U OF ARKANSAS MED SCI CAM	1,236	869	853	680
189	UNIVERSITY OF OREGON MAIN	1,211	1,378	1,164	2,871
190	ROCHESTER INST TECHNOLOGY	1,180	1,263	-	845
	TOTAL, 1ST 190 INSTS.	1,882,131	1,689,038	1,491,276	1,279,719
191	DARTMOUTH COLLEGE	1,127	994	651	631
192	MURRAY STATE UNIVERSITY	1,122I	975	-	71
193	WAKE FOREST UNIVERSITY	1,084E	1,025E	969	758
194	THE UNIVERSITY OF ALABAMA	1,079E	995	666	341
195	CLEVELAND STATE UNIV	1,056	755	222	282
196	ILLINOIS INST OF TECH	1,048I	945	488	539
197	UNIVERSITY OF NOTRE DAME	1,029	991	782	772
198	UNIVERSITY OF GUAM	1,014	447I	-	388
199	ARIZONA STATE UNIVERSITY	999	3,595	1,040	1,364
200	UNIV OF SOUTHWESTERN LA	992	998	1,149	-
	TOTAL, 1ST 200 INSTS.	1,892,681	1,700,756	1,497,243	1,284,865
	TOTAL, ALL OTHER INSTS.	64,075	59,296	66,890	59,961

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-43. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	1,956,756	268,053	124,326	134,650	53,943	1,118,851	29,983	159,353	67,597
1 UNIVERSITY OF MINNESOTA	53,602	3,947	1,217	1,080	496	40,611	603	2,195	453
2 UNIV OF WIS-MADISON	43,877	4,749	4,839	4,602	1,362	26,151	1,063	3,557	2,554
3 TEXAS A & M UNIVERSITY	39,601	11,146	1,471	606	86	25,148	11	1,153	0
4 UNIVERSITY OF GEORGIA	37,642	1,348	993	947	625	27,687	600	5,442	0
5 MICHIGAN STATE UNIVERSITY	37,524	1,330	1,064	1,385	197	28,277	1,085	2,378	1,818
6 LOUISIANA STATE UNIV	37,190	3,342	1,855	2,582	930	26,612	113	1,756	0
7 CORNELL UNIVERSITY	37,028	2,405	1,844	95	192	28,029	1,368	3,013	92
8 UNIVERSITY OF MICHIGAN	35,767	5,579	702	3,490	899	16,029	1,753	7,315	0
9 UNIVERSITY OF ARIZONA	33,536	2,797	5,394	8,318	253	13,694	96	2,634	350
10 UNIV OF CAL DAVIS	33,351	1,940	375	126	1	28,943	26	1,858	82
TOTAL, 1ST 10 INSTS.	391,118	38,583	19,754	23,231	5,011	261,181	6,718	31,301	5,339
11 UNIVERSITY OF FLORIDA	33,029E	10,577E	1,604E	373E	210E	18,118E	417E	1,265E	465E
12 IOWA ST U OF SCI & TECH	32,640	5,831	783	701	1,643	17,615	203	1,394	4,470
13 UNIV OF ILL URBANA	30,947	5,689	1,923	3,478	2,965	10,109	445	5,103	1,235
14 OHIO STATE UNIVERSITY	30,097	4,711	919	521	430	20,145	140	1,438	1,793
15 UNIV OF TEXAS AT AUSTIN	29,955	5,241	5,814	7,825	1,572	2,830	348	3,196	3,129
16 N C STATE UNIV AT RALEIGH	27,114	4,479	208	1,632	622	20,068	0	105	0
17 PENNSYLVANIA STATE UNIV	26,839	6,519	774	2,666	4,031	10,229	117	1,154	1,349
18 UNIV OF CAL BERKELEY	26,250	4,483	1,287	596	130	12,404	802	5,666	882E
19 MASS INST OF TECHNOLOGY	25,166	12,177	4,288	319	1,807	4,491	123	1,106	865
20 HARVARD UNIVERSITY	24,524E	693E	3,262E	1,349E	442E	16,187E	434E	1,790E	377E
TOTAL, 1ST 20 INSTS.	677,679	98,973	40,616	42,691	18,863	393,367	9,747	53,518	19,904
21 UNIV OF SOUTHERN CAL	24,303	4,550	697	2,300	41	14,297	445	1,973	0
22 GEORGIA INSTITUTE OF TECH	23,826	16,449	2,388	1,011	1,803	247	56	1,685	187
23 PURDUE UNIVERSITY	23,724	5,036	558	77	154	15,112	272	2,220	295
24 UNIV OF PENNSYLVANIA	23,645	1,059	1,022	248	1,076	13,819	84	6,170	167
25 UNIV OF NEBRASKA-LINCOLN	22,227	1,664	732	3,149	200	15,225	178	1,079	0
26 UNIVERSITY OF ROCHESTER	21,955	8,396	1,085	4	153	11,229	407	170	511
27 UNIV OF MISSOURI COLUMBIA	21,017	954	143	230	17	17,271	343	1,928	131
28 MISSISSIPPI STATE UNIV	20,211	756	96	27	76	17,933	0	1,137	176
29 RUTGERS THE ST UNIV OF NJ	20,176	1,151	936	2,314	1,489	9,179	855	2,557	1,695
30 OREGON STATE UNIVERSITY	20,044	1,248	376	2,252	346	14,410	0	991	221
TOTAL, 1ST 30 INSTS.	898,907	140,246	48,649	54,303	24,418	522,089	12,387	73,428	23,287
31 WASHINGTON STATE UNIV	19,683	1,934	324	47	26	15,486	29	86	1,791
32 KANS ST U - AG & APP SCI	19,116	1,846	218	378	43	12,103	17	319	4,187
33 ROCKEFELLER UNIVERSITY	19,799	0	1,798	0	940	14,199	1,862	0	0
34 UNIVERSITY OF WASHINGTON	19,749	1,187	269	1,451	31	12,963	286	721	1,881
35 UNIV OF CAL LOS ANGELES	19,569	718	180	1,409	32	11,972	154	4,204	0
36 UNIV OF ARK FAYETTEVILLE	19,224	3,754E	3,218E	399E	27E	5,760E	0	3,272E	1,794E
37 COLUMBIA UNIV MAIN DIV	17,679	3,640	522	248	25	10,801	76	2,366	0
38 VA POLYTECH INST & ST U	17,224	4,115	808	485	49	11,087	86	594	0
39 UNIVERSITY OF KENTUCKY	16,920	3,335	187	405	23	12,812	0	158	0
40 UNIV OF MD COLLEGE PARK	16,743	1,791	4,230	172	3,311	6,423	180	628	8
TOTAL, 1ST 40 INSTS.	1,080,512	162,566	60,403	59,297	28,925	635,520	15,077	85,776	32,948
41 UNIVERSITY OF CONNECTICUT	16,738	1,684	1,112	405	292	11,135	1,512	598	0
42 UNIV OF TEX CANCER CENTER	16,449	0	719	0	1,379	14,351	0	0	0
43 UNIV OF CAL RIVERSIDE	16,099	0	102	263	216	14,381	9	152	976E
44 UNIV OF ALASKA FAIRBANKS	15,567	334	373	7,625	0	5,537	0	1,268	430
45 UNIV OF HAWAII-MANOA	14,760	948	1,445	2,400	0	7,283	0	989	1,695
46 UNIV OF CAL SAN DIEGO	13,792	85	641	7,774	275	4,552	9	68	388E
47 UNIVERSITY OF COLORADO	13,424	641	2,132	860	208	8,131	1,002	400	50
48 JOHNS HOPKINS UNIVERSITY	13,349	1,093	745	1,591	230	8,596	245	684	165
49 AUBURN UNIVERSITY	13,279	1,363	193	2	0	11,651	0	70	0
50 NEW YORK UNIVERSITY	13,034	0	241	1	226	10,125	341	1,162	938
TOTAL, 1ST 50 INSTS.	1,227,003	168,714	68,106	80,218	31,751	731,262	18,195	91,167	37,590

SEE FOOTNOTES AT END OF TABLE.

TABLE B-43. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 FLORIDA STATE UNIVERSITY	12,996	0	3,004	1,504	2,827	2,007	811	2,563	280
52 UNIVERSITY OF CINCINNATI	12,950	1,015	209	110	12	11,032	11	27	534
53 CLEMSON UNIVERSITY	12,519	3,146	257	0	39	8,646	0	431	0
54 OKLAHOMA STATE UNIVERSITY	12,310	1,770I	345I	206I	16I	8,292I	0I	1,191I	490I
55 UNIV OF CAL SAN FRANCISCO	12,254	0	28	0	5	12,198	0	23	0
56 COLORADO STATE UNIVERSITY	12,190	2,813	312	178	202	7,047	18	865	755
57 UNIVERSITY OF MIAMI	12,186	327	37	4,155	37	7,235	14	1	376
58 WASHINGTON UNIVERSITY	11,623	454	385	27	237	10,046	66	408	0
59 YESHIVA UNIVERSITY	11,126	0	3	0	7	11,058	0	58	0
60 CASE WESTERN RESERVE UNIV	10,967	2,744	455	140	0	7,681	72	375	0
TOTAL, 1ST 60 INSTS.	1,348,120	190,483	73,141	86,538	35,133	816,504	19,187	97,109	40,025
61 NORTHWESTERN UNIVERSITY	10,646	570	267	68	12	8,201	62	369	1,097
62 STANFORD UNIVERSITY	10,475	3,854	622	878	707	3,448	698	268	0
63 NORTH DAKOTA STATE UNIV	10,091	40	171	8	12	9,816	3	41	0
64 UTAH STATE UNIVERSITY	9,792	2,009	144	641	46	4,750	62	875	1,265
65 CARNEGIE-MELLON UNIV	9,663	1,557	580	1,416	1,017	3,779	281	657	376
66 INST OF AGRI UNIV OF TENN	9,833I	0	0	0	0	8,833I	0	0	0
67 WAYNE STATE UNIVERSITY	9,622	1,701	646	8	352	4,731	172	869	143
68 UNIVERSITY OF PITTSBURGH	9,536	1,132	456	243	1,078	3,381	59	812	1,375
69 UNIV OF MAINE ORONO	8,514	740	437	1,353	82	4,819	28	809	246
70 UNIVERSITY OF CHICAGO	9,318	0	1,173E	190E	101E	5,931E	210E	713E	0
TOTAL, 1ST 70 INSTS.	1,441,610	192,086	77,637	91,343	38,540	874,193	20,762	102,522	44,527
71 WEST VIRGINIA UNIVERSITY	9,285	2,243	329	189	63	3,796	5	1,660	0
72 UNIV OF OKLAHOMA NORMAN	8,171	1,363	874	3,856	32	594	127	1,325	0
73 INDIANA UNIV	8,029	163	976	153	183	4,802	322	725	705
74 GEORGETOWN UNIVERSITY	7,944	0	42	0	0	3,041	0	19	4,842
75 SYRACUSE UNIVERSITY	7,891	1,256	840	115	276	956	172	3,986	290E
76 ST JOHN'S UNIVERSITY (NY)	7,883	0	1,128	0	2,003	874	710	3,168	0
77 YALE UNIVERSITY	7,874	97	382	15	149	5,492	332	1,407	0
78 SUNY AT BUFFALO	7,773	1,000	573	155	313	5,209	45	371	107
79 SUNY AT STONY BROOK	7,723	298	1,514	1,224	259	3,439	313	223	453
80 UNIVERSITY OF DELAWARE	7,566	2,056	376	1,320	73	1,840	79	347	1,475
TOTAL, 1ST 90 INSTS.	1,520,749	200,562	84,671	98,370	41,891	904,236	22,867	115,753	52,399
81 UNIV OF NC AT CHAPEL HILL	7,344	0	37	1,299	33	3,664	4	1,681	626
82 UNIVERSITY OF IDAHO	7,319	458	159	93	3	5,639	0	805	152
83 UNIV OF P R-MAYAGUEZ	7,273	58	0	0	0	7,215	0	0	0
84 MONTANA STATE UNIVERSITY	7,233	687	414	393	14	5,310	0	415	0
85 PRINCETON UNIVERSITY	6,926	1,552	1,039	901	527	1,178	182	1,547	0
86 UNIV OF MASS AT AMHERST	6,753	777	886	1,709	156	2,697	182	346	0
87 BAYLOR COL OF MEDICINE	6,697	0	0	0	0	6,697	0	0	0
88 TEXAS TECH UNIVERSITY	6,659	2,228	391	585	28	3,313	37	46	41
89 U OF HOUSTON CENTRAL CAM	6,474	3,396	1,020	398	124	676	483	184	193
90 ALBANY MEDICAL COLLEGE	6,069	0	0	0	0	6,069	0	0	0
TOTAL, 1ST 90 INSTS.	1,589,506	209,728	88,617	103,748	42,776	946,694	23,755	120,777	53,411
91 UNIV ALABAMA BIRMINGHAM	5,788	50	199	0	8	5,526	0	5	0
92 U TEX HLTH SCI CTR DALLAS	5,715	0	0	0	0	5,715	0	0	0
93 U TEX MED BRNCH GALVESTON	5,654	0	0	0	0	5,654	0	0	0
94 RENSSELAER POLYTECH INST	5,632	4,011	907	0	214	162	16	63	259E
95 UNIVERSITY OF UTAH	5,587	1,722	495	464	349	2,450	44	63	0
96 CUNY MT SINAI SCH OF MED	5,536	0	0	0	0	5,536	0	0	0
97 MICHIGAN TECH UNIVERSITY	5,290	2,83.	515	300	72	1,331	0	237	0
98 UNIVERSITY OF IOWA	5,253	317	809	6	0	3,753	190	188	0
99 UNIVERSITY OF NEW MEXICO	5,218	704	79	340	22	1,506	44	973	1,450
100 CALIFORNIA INST OF TECH	4,929	1,397	875	925	618	507	0	225	0
TOTAL, 1ST 100 INSTS.	1,644,119	220,764	92,496	105,783	44,059	979,316	24,049	122,531	55,120

SEE FOOTNOTES AT END OF TABLE.

TABLE B-49. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 TEMPLE UNIVERSITY	4,927	2	180E	R	0	3,536E	69	1,132E	0
102 U OF CAL SYS WIDE PRGMS	4,912	11	69	0	0	3,901	0	189	742
103 UNIVERSITY OF WYOMING	4,816	287	360	734	5	2,981	0	269	280
104 SOUTH DAKOTA STATE UNIV	4,759	160	59	0	0	3,928	0	359	253
105 TULANE UNIVERSITY	4,436	230E	54E	2E	65E	3,889E	74E	61E	61E
106 UNIV OF NEVADA - RENO	4,325	943	12	71	0	2,993	6	300	0
107 UNIV OF ILL MED CTR CMGO	4,315	0	0	0	0	4,315	0	0	0
108 LEHIGH UNIVERSITY	4,292	1,741	1,076	164	329	155	12	298	507
109 WOODS HOLE OCNGRPHIC INST	4,167	295	0	3,982	0	0	0	0	0
110 VANDERBILT UNIVERSITY	4,072	226	247	7	78	2,986	179	279	70
TOTAL, 1ST 110 INSTS.	1,689,129	224,649	94,553	110,651	44,536	1,007,900	24,389	125,418	57,033
111 UNIV OF VT & ST AGRIC COL	4,045	155	79	13	0	3,650	32	62	54
112 UNIV OREGON HLTH SCI CTR	4,018	0	0	0	0	3,998	20	0	0
113 SUNY COL OF ENV SCI & FOR	4,013	1,396	285	903	0	1,429	0	0	0
114 MEDICAL COLLEGE OF WIS	3,991	0	0	0	0	3,991	0	0	0
115 UNIVERSITY OF DENVER	3,957	718	357	0	25	42	128	680	2,007
116 UNIV OF NEW HAMPSHIRE	3,923	129	242	514	3	1,975	2	37	1,021
117 NEW MEXICO STATE UNIV	3,900	2,565	104	582	50	337	26	215	12
118 U TEX HLTH SCI CTR S ANTO	3,814	0	0	0		3,814	0	0	0
119 UNIVERSITY OF MISSISSIPPI	3,755	528	142	108	0	2,803	32	142	0
120 UNIVERSITY OF VIRGINIA	3,691	564	244	276	4	1,764	30	685	144
TOTAL, 1ST 120 INSTS.	1,728,236	230,694	96,006	113,047	44,627	1,031,703	24,659	127,239	60,271
121 INSTITUTE PAPER CHEMISTRY	3,615E	1,686E	729E	675E	62E	464E	0	0	0
122 U TENNESSEE KNOXVILLE	3,573E	1,579I	118I	44I	15I	478I	87I	1,252I	0
123 SOUTHERN ILL U-CARBONDALE	3,545	126	113	477	9	1,155	74	937	654
124 HOWARD UNIVERSITY	3,486	517	220	0	7	1,869	11	853	9
125 VIRGINIA COMMONWLTH UNIV	3,444	0	34	0	0	3,329	0	81	0
126 SUNY DOWNSTATE MED CTR	3,441	0	0	0	0	3,441	0	0	0
127 UNIV OF MISSOURI ROLLA	3,357	2,533	755	21	32	2	0	3	11
128 UNIV OF WIS-MILWAUKEE	3,324	393	555	776	37	143	73	525	822
129 COL OF MED & DENT OF N J	3,299	0	0	0	0	3,299	0	0	0
130 UNIV OF ILL CHICAGO CTR	3,196	404	494	374	349	307	56	1,211	1
TOTAL, 1ST 130 INSTS.	1,762,517	237,922	99,024	115,414	45,138	1,046,190	24,960	132,101	61,768
131 UNIVERSITY OF KANSAS	3,133	272I	125I	1,113I	18I	495I	55II	476I	143I
132 UNIV OF CAL IRVINE	3,092	81	112	0	2	2,474	7	395	21
133 UNIV OF RHODE ISLAND	3,035E	1,255I	0I	1,006I	0	506I	0	318I	0
134 UNIV OF MO CENTRAL OFF	3,072	1,125	0	785	0	1,083	0	79	0
135 DUKE UNIVERSITY	2,901	252	276	62	51	2,056	14	180	0
136 UNIV OF CAL SANTA BARBARA	2,839	146	356	939	179	153	33	602	481E
137 DESERT RESEARCH INSTITUTE	2,839	0	0	2,474	0	263	0	102	0
138 UNIV OF CENTRAL FLORIDA	2,729	2,288	63	2	8	202	0	166	0
139 UNIV OF OKLA HLTH SCI CTR	2,667	0	0	0	768	1,866	33E	0	0
140 NORTHERN ILLINOIS UNIV	2,665	0	596	344	433	275	135	882	0
TOTAL, 1ST 140 INSTS.	1,791,649	243,391	100,552	122,139	46,597	1,055,563	25,733	135,301	62,413
141 RUSH UNIVERSITY	2,620	0	0	0	0	2,609	11	0	0
142 GALLAUDET COLLEGE	2,539E	0	738I	0	932I	0	0	919I	0
143 BROWN UNIVERSITY	2,575	700	400	200	30	1,200	0	45	0
144 U TEX HLTH SCI CTR HOUSTN	2,529	0	0	117	0	2,395	0	17	0
145 BRIGHAM YOUNG UNIVERSITY	2,491E	1,195E	300E	0	0	878E	8E	130E	0
146 OLD DOMINION U RES FUN	2,460E	201	589I	732I	0	1,119I	0	0	0
147 UNIV OF WEST FLORIDA	2,356	0	52	165	249	31	83	1,786	0
148 SUNY UPSTATE MEDICAL CTR	2,316E	0	0	0	0	2,316E	0	0	0
149 UNIVERSITY OF LOUISVILLE	2,305	314	70	27	0	1,226	15	492	171
150 N MEX INST MINING & TECH	2,301	1,759E	14	463	45	9	1	0	0
TOTAL, 1ST 150 INSTS.	1,816,191	247,349	102,715	123,843	47,853	1,067,346	25,851	139,650	62,584

SEE FOOTNOTES AT END OF TABLE.

TABLE B-43. -- NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY FIELD: FISCAL YEAR 1980

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
151 POLYTECHNIC INST OF N Y	2,230E	1,881E	300E	0	14E	6E	0	29E	0
152 U OF NEB MED CTR AT OMAHA	2,206	0	0	0	0	2,206	0	0	0
153 NEW YORK INST TECHNOLOGY	2,197	215	49	0	1,264	648	21	0	0
154 GEORGE WASHINGTON UNIV	2,131	148	1	11	373	1,316	0	221	111
155 EMORY UNIVERSITY	2,167	0	137	1	5	2,015	3	6	0
156 BOSTON UNIVERSITY	2,155	87	163	60	0	1,341	12	197	295
157 UNIV OF CAL SANTA CRUZ	2,021	0	1,639	87	57	205	11	18	4
158 UNIV OF SOUTH FLORIDA	2,012	464	89	202	4	769	6	478	0
159 RICE UNIVERSITY	1,845	428	789	381	74	134	22	17	0
160 MED UNIV OF SO CAROLINA	1,841	0	0	0	0	1,841	0	0	0
TOTAL, 1ST 160 INSTS.	1,837,045	250,572	105,882	124,585	49,644	1,077,827	25,926	139,616	62,994
161 UNIV OF TEXAS AT DALLAS	1,815	0	718	426	91	370	78	132	0
162 THOMAS JEFFERSON UNIV	1,793E	0	0	0	0	1,793E	0	0	0
163 UNIVERSITY OF NEW ORLEANS	1,737	44	277	4	423	581	0	458	0
164 UNIV OF MD BALT PROF SCH	1,766	0	0	0	0	1,766	0	0	0
165 UNIV OF SOUTH CAROLINA	1,755E	196E	235E	171E	158E	482E	138E	375E	0
166 TUFTS UNIVERSITY	1,724	9	6	0	13	1,638	16	42	0
167 UNIVERSITY OF DAYTON	1,690	1,116	323	14	160	27	3	10	37
168 CALIF ST COL STANISLAUS	1,634	0	366	0	0	462	323	533	0
169 STEVENS INSTITUTE OF TECH	1,670	839	378	55	1	0	352	45	0
170 WORCESTER POLY INSTITUTE	1,661	1,537	49	0	10	25	0	40	0
TOTAL, 1ST 170 INSTS.	1,854,391	254,313	108,234	125,255	50,500	1,084,971	26,836	141,251	63,031
171 OHIO UNIVERSITY	1,587	793	318	17	44	295	63	57	0
172 WRIGHT STATE UNIVERSITY	1,559	16	284	82	26	1,003	16	6	125
173 ST LOUIS UNIVERSITY	1,556E	0	1	68	0	1,424	0	63	0
174 SUNY AT ALBANY	1,535E	0	309E	956E	12E	130E	77E	121E	0
175 N J INST OF TECHNOLOGY	1,503	463	269	0	0	0	0	763	8
176 NORTH TEXAS STATE UNIV	1,486E	0	561E	203E	8E	15E	0	605E	94E
177 UNIV OF ARK PINE BLUFF	1,453	47	185	0	510	458	0	244	14
178 MED COL OF OHIO AT TOLEDO	1,437	0	0	0	0	1,437	0	0	0
179 UNIVERSITY OF NEW ORLEANS	1,416I	0	0I	0	0	675I	0	741I	0
180 DREXEL UNIVERSITY	1,407	674	559	0	76	68	15	15	0
TOTAL, 1ST 180 INSTS.	1,869,304	256,306	110,720	126,481	51,176	1,090,476	27,007	143,866	63,272
181 WICHITA STATE UNIVERSITY	1,395	804	44	327	0	31	4	185	0
182 UNIVERSITY OF MONTANA	1,359	0	34	149	22	706	3	316	129
183 UNIV TENN CTR HEALTH SCI	1,347	0	0	0	0	1,347	0	0	0
184 OREGON GRADUATE CENTER	1,340	132	722	380	0	106E	0	0	0
185 U MASS MED SCHL WORCESTER	1,272	0	0	0	0	1,272	0	0	0
186 UNIV OF P R-RIO PIEDRAS	1,247I	0	144I	0	237I	148I	0	718I	0
187 SUNY AT BINGHAMTON	1,240	0	226	116	43	235	143	477	0
188 U OF ARKANSAS MED SCI CAM	1,236	0	0	0	0	1,236	0	0	0
189 UNIVERSITY OF OREGON MAIN	1,211	0	269	220	3	117	32	208	362
190 ROCHESTER INST TECHNOLOGY	1,130	48	28	0	0	0	0	1,104	0
TOTAL, 1ST 190 INSTS.	1,882,131	257,290	112,187	127,673	51,481	1,095,674	27,189	146,874	63,763
191 DARTMOUTH COLLEGE	1,127	290	168	11	5	602	13	38	0
192 MURRAY STATE UNIVERSITY	1,122I	0I	150I	6I	0I	965I	0	11	0
193 WAKE FOREST UNIVERSITY	1,034E	0	45	0	0	984E	0	0E	55E
194 THE UNIVERSITY OF ALABAMA	1,079E	733E	85E	10E	5E	81E	4E	20E	141E
195 CLEVELAND STATE UNIV	1,056	291	46	12	63	72	5	577	0
196 ILLINOIS INST OF TECH	1,048I	381I	97I	277I	98I	14I	181I	0	0
197 UNIVERSITY OF NOTRE DAME	1,029	345	196	5	6	280	4	0	193
198 UNIVERSITY OF GUAM	1,014	0	0	465	0	302	0	247	0
199 ARIZONA STATE UNIVERSITY	939	386	137	113	4	136	25	198	0
200 UNIV OF SOUTHWESTERN LA	932	65	C	98	53	98	629	49	0
TOTAL, 1ST 200 INSTS.	1,892,691	259,771	113,111	128,670	51,715	1,099,208	28,050	148,004	64,152
TOTAL, ALL OTHER INSTS.	64,075	8,282	11,215	5,980	2,228	19,643	1,933	11,349	3,445

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIPATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-49. -- R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS, BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1970 AND 1972-80

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1970	1972	1973	1974	1975	1976	1977	1978	1979	1980
TOTAL	736,847	753,243	816,923	865,098	986,736	1,146,712	1,383,814	1,716,911	1,934,797	2,234,809
CHARACTER OF WORK: 1/										
BASIC RESEARCH	268,732	243,870	296,492	285,082	309,195	358,811	402,168	-	718,303	774,080
APPLIED RESEARCH AND DEVELOPMENT	469,115	509,373	520,431	580,016	677,541	787,901	981,646	-	1,216,494	1,460,729
FIELD:										
ENGINEERING 2/	159,063	195,393	251,539	259,080	275,382	299,683	380,420	522,213	561,083	543,569
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	-	-	-	-	-	24,779
CHEMICAL	-	-	-	-	-	-	-	-	-	34,183
CIVIL	-	-	-	-	-	-	-	-	-	17,852
ELECTRICAL	-	-	-	-	-	-	-	-	-	203,657
MECHANICAL	-	-	-	-	-	-	-	-	-	140,309
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	222,890
PHYSICAL SCIENCES	429,133	426,027	425,107	455,418	523,160	622,887	736,702	854,455	903,562	1,120,095
ASTRONOMY	19,765	28,089	28,055	29,944	31,153	32,452	41,900	38,452	46,099	54,325
CHEMISTRY	71,229	74,375	73,114	64,920	69,658	96,268	111,564	97,529	101,142	149,212
PHYSICS	317,549	305,086	318,002	268,187	322,464	376,632	447,110	568,040	584,519	823,797
OTHER, N.E.C.	19,646	18,477	5,936	92,367	99,885	117,535	136,628	150,434	271,802	88,061
ENVIRONMENTAL SCIENCES 2/	26,973	36,684	50,647	47,864	63,175	77,476	100,981	128,217	141,100	174,193
ATMOSPHERIC	-	-	-	-	-	-	-	-	-	35,577
EARTH SCIENCES	-	-	-	-	-	-	-	-	-	61,315
OCEANOGRAPHY	-	-	-	-	-	-	-	-	-	5,929
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	71,572
MATHEMATICAL/COMPUTER SCIENCES	39,213	41,174	53,178	54,339	62,416	71,641	78,584	119,203	126,850	161,540
MATHEMATICS 3/	-	-	14,744	16,002	17,715	22,063	15,358	8,100	6,614	128,054
COMPUTER SCIENCES 3/	-	-	38,434	38,337	44,701	49,578	63,226	111,103	120,236	33,496
LIFE SCIENCES	34,176	35,854	33,964	34,367	42,284	50,198	57,949	58,439	73,441	75,499
AGRICULTURAL SCIENCES 3/	-	0	35	0	0	0	354	1,206	1,551	545
BIOLOGICAL SCIENCES	26,804	28,810	24,344	26,711	31,661	38,253	43,569	48,154	62,659	56,106
MEDICAL SCIENCES	6,753	3,656	3,312	3,877	4,963	5,081	4,761	7,963	7,179	7,734
OTHER, N.E.C.	619	3,388	6,273	4,279	5,660	6,864	9,265	1,116	2,052	11,014
PSYCHOLOGY	1,506	1428	898	850	306	92	87	403	110	135
SOCIAL SCIENCES	5,059	8,568	169	330	795	1,288	3,301	5,119	5,861	17,449
ECONOMICS	23	0	0	14	795	1,277	3,280	3,875	3,735	9,657
POLITICAL SCIENCE	223	89	0	0	0	0	0	1,244	2,126	2,422
SOCIOLOGY	102	54	169	316	0	0	0	0	0	1,500
OTHER, N.E.C.	4,717	8,425	0	0	0	11	21	0	0	3,870
OTHER SCIENCES, N.E.C.	12,674	8,115	11,421	12,850	18,918	23,447	25,690	29,162	29,790	42,229

1/ DATA WERE NOT COLLECTED IN 1974.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
3/ NOT SEPARATELY AVAILABLE PRIOR TO 1973.
4/ NOT SEPARATELY AVAILABLE PRIOR TO 1972, INCLUDED IN BIOLOGICAL SCIENCES; ESTIMATED FOR 1972 AND 1973, BASED ON DATA COLLECTED IN 1974.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-30. -- FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1970 AND 1972-80

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1970	1972	1973	1974	1975	1976	1977	1978	1979	1980
TOTAL	734,131	749,779	812,894	861,716	982,547	1,139,983	1,377,114	1,709,790	1,929,154	2,224,830
CHARACTER OF WORK: 1/										
BASIC RESEARCH	267,084	242,776	294,504	283,260	308,215	357,644	401,340	-	716,057	769,576
APPLIED RESEARCH AND DEVELOPMENT	467,047	507,003	518,390	578,456	674,332	782,339	975,769	-	1,213,097	1,455,254
FIELD:										
ENGINEERING 2/	188,712	194,876	250,672	258,888	275,252	298,382	378,852	520,468	558,324	639,503
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	-	-	-	-	-	24,769
CHEMICAL	-	-	-	-	-	-	-	-	-	33,859
CIVIL	-	-	-	-	-	-	-	-	-	17,558
ELECTRICAL	-	-	-	-	-	-	-	-	-	202,594
MECHANICAL	-	-	-	-	-	-	-	-	-	139,045
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	221,678
PHYSICAL SCIENCES	427,879	425,475	423,037	453,899	520,940	619,2[illegible]	733,575	849,460	1,002,515	1,118,128
ASTRONOMY	19,759	27,229	27,728	29,941	31,133	32,452	41,500	38,452	46,099	59,012
CHEMISTRY	71,206	74,456	72,843	64,787	69,197	95,835	111,136	97,254	101,108	149,064
PHYSICS	317,263	305,271	316,627	267,315	320,877	374,921	445,221	586,345	583,654	822,080
OTHER, N.E.C.	19,646	18,519	5,839	91,856	99,713	115,934	135,716	167,199	271,654	87,972
ENVIRONMENTAL SCIENCES 2/	26,923	36,396	40,017	46,814	62,219	76,216	99,525	127,122	140,343	172,253
ATMOSPHERIC	-	-	-	-	-	-	-	-	-	35,280
EARTH SCIENCES	-	-	-	-	-	-	-	-	-	60,270
OCEANOGRAPHY	-	-	-	-	-	-	-	-	-	5,846
OTHER, N.E.C.	-	-	-	-	-	-	-	-	-	70,857
MATHEMATICAL/COMPUTER SCIENCES	37,554	41,130	52,957	54,230	62,268	71,541	78,479	119,203	126,950	160,230
MATHEMATICS 3/	-	-	14,616	15,895	17,626	21,971	15,262	8,100	6,614	127,995
COMPUTER SCIENCES 3/	-	-	38,341	38,335	44,642	49,570	63,217	111,103	120,236	32,235
LIFE SCIENCES	34,013	35,456	33,685	34,009	41,863	49,842	57,641	58,242	73,084	75,360
AGRICULTURAL SCIENCES 4/	-	0	0	0	0	0	354	1,206	1,551	645
BIOLOGICAL SCIENCES	26,671	28,840	24,202	26,037	31,473	38,070	43,441	47,995	62,357	55,753
MEDICAL SCIENCES	6,723	3,220	3,219	3,693	4,885	5,072	4,753	7,925	7,124	7,665
OTHER, N.E.C.	619	3,396	6,264	4,279	5,505	6,700	9,093	1,116	2,052	10,997
PSYCHOLOGY	1,486	1,410	896	848	304	92	87	103	110	135
SOCIAL SCIENCES	4,258	6,904	169	330	795	1,277	3,280	5,119	5,861	17,422
ECONOMICS	20	0	0	14	795	1,277	3,280	3,875	3,735	9,647
POLITICAL SCIENCE	201	75	0	0	0	0	0	1,244	2,126	2,419
SOCIOLOGY	91	45	169	316	0	0	0	0	0	1,496
OTHER, N.E.C.	3,946	6,784	0	0	0	0	0	0	0	3,860
OTHER SCIENCES, N.E.C.	13,309	8,132	11,421	12,698	18,906	23,431	25,675	29,099	22,067	42,099

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
3/ NOT SEPARATELY AVAILABLE PRIOR TO 1973.
4/ NOT SEPARATELY AVAILABLE PRIOR TO 1972, INCLUDED IN BIOLOGICAL SCIENCES; ESTIMATED FOR 1972 AND 1973, BASED ON DATA COLLECTED IN 1974.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 9-51. -- R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY YEAR AND CHARACTER OF WORK: FISCAL YEARS 1953-80

(DOLLARS IN MILLIONS)

FISCAL YEAR	TOTAL	BASIC RESEARCH		APPLIED RESEARCH AND DEVELOPMENT	
		AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL
1953	121	33	27.3%	88	72.7%
1954	141	39	27.7	102	72.3
1955	180	49	27.2	131	72.8
1956	194	51	26.3	143	73.7
1957	240	65	27.1	175	72.9
1958	293	78	26.6	215	73.
1959	338	92	27.2	246	72.8
1960	360	97	26.9	263	73.1
1961	410	115	28.0	295	72.0
1962	470	136	28.9	334	71.1
1963	530	159	30.0	371	70.0
1964	629	191	30.4	438	69.6
1965	629	208	33.1	421	66.9
1966	630	227	36.0	403	64.0
1967	673	250	37.1	423	62.9
1968	719	276	38.4	443	61.6
1969	725	275	37.9	450	62.1
1970	737	269	36.5	468	63.5
1971	716	260	36.3	456	63.7
1972	753	244	32.4	509	67.6
1973	817	296	36.2	521	63.8
1974	865	285	32.9	580	67.1
1975	987	309	31.3	678	68.7
1976	1,147	359	31.3	788	68.7
1977	1,384	402	29.0	982	71.0
1978 1/	1,717	-	-	-	-
1979	1,935	718	37.1	1,217	62.9
1980	2,235	774	34.6	1,461	65.4

1/ DATA WERE NOT COLLECTED IN 1978.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE S-52. -- R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY FIELD: FISCAL YEAR 1980

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	2,234,939	643,669	1,120,095	174,193	161,540	75,499	135	17,449	42,229
1 LAWRENCE LIVERMORE LAB (UNIV OF CALIFORNIA)	401,315	52,133	285,986	35,939	14,875	3,264	0	0	8,918
2 JET PROPULSION LABORATORY (CALIFORNIA INST OF TECH)	385,530	201,632	65,541	16,579	97,539	4,240	0	0	0
3 LOS ALAMOS NATIONAL LAB (UNIV OF CALIFORNIA)	375,392	120,000	178,125	8,250	29,875	13,875	0	10,125	16,142
4 ARGONNE NATL LABORATORY (UNIV OF CHICAGO)	285,676	134,818	84,580	50,327	2,786	14,165	0	0	0
5 BROOKHAVEN NAT'L LAB (AUI) 1/	137,657	21,921	80,751	9,187	958	17,532	0	4,390	2,918
6 LINCOLN LABORATORY (MASS INST OF TECHNOLOGY)	135,040	95,203	26,603	0	13,099	0	135	0	
7 LAWRENCE BERKELEY LAB (UNIV OF CALIFORNIA)	133,632	12,784	70,342	25,016	3,246	18,591	0	120	533
8 PLASMA PHYSICS LABORATORY (PRINCETON UNIV)	125,027E	0	125,027E	0	0	0	0	0	0
9 FERMI NAT ACCELERATOR LAB (URA) 2/	83,222	0	83,222	0	0	0	0	0	0
10 STFRD LINEAR ACCELRTR CTR (STANFORD UNIVERSITY)	66,544	0	66,544	0	0	0	0	0	0
TOTAL, 1ST 10 INSTS.	2,127,835	638,491	1,067,721	145,297	161,378	71,667	135	14,635	28,511
11 NATL CTR ATMOSPHERIC RES (UCAR) 3/	33,893	0	5,798	27,995E	0	0	0	0	0
12 AMES LABORATORY (IOWA STATE UNIV OF SCI)	16,724	5,278	11,307	57	162	0	0	0	0
13 CENTER FOR NAVAL ANALYSES (UNIV OF ROCHESTER)	14,031	0	0	0	0	0	0	313	13,718
14 NAT'L RADIO ASTRONOMY OBS (AUI) 1/	12,032	0	12,032	0	0	0	0	0	0
15 KITT PEAK NAT'L OBSERVTRY (AURA) 4/	10,802	0	10,802	0	0	0	0	0	0
16 OAK RIDGE ASSOCIATED UNIV (ORAU) 5/	7,928	0	1,595	0	0	3,832	0	2,501	0
17 CERRO TOLOLO INTER-AM OBS (AURA) 4/	4,865	0	4,865	0	0	0	0	0	0
18 NAT'L ASTRON & IONOS CTR (CORNELL UNIVERSITY)	4,477	0	3,633	844	0	0	0	0	0
19 SACRAMENTO PEAK OBSERVTRY (AURA) 4/	2,242	0	2,242	0	0	0	0	0	0
TOTAL, 1ST 19 INSTS.	2,234,839	643,669	1,120,095	174,193	161,540	75,499	135	17,449	42,229

1/ ASSOCIATED UNIVERSITIES, INC.
2/ UNIVERSITIES RESEARCH ASSOCIATION
3/ UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH
4/ ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC.
5/ OAK RIDGE ASSOCIATED UNIVERSITIES

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-51. -- R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS: FISCAL YEARS 1977-80

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1980	1979	1978	1977	1980	1979	1978	1977
TOTAL, ALL INSTITUTIONS	2,236,803	1,934,797	1,716,911	1,383,814	2,224,830	1,929,154	1,709,790	1,377,114
1 LAWRENCE LIVERMORE LAB	401,115	323,630	303,504	256,012	398,794	322,081	298,984	254,557
2 JET PROPULSION LABORATORY	385,530	327,654	278,545	173,879	385,530	327,654	278,545	173,879
3 LOS ALAMOS NATIONAL LAB	375,392	330,000	287,899	247,000	374,304	329,330	287,752	247,000
4 ARGONNE NATL LABORATORY	286,676	256,381	231,127	159,080	284,364	254,779	229,547	156,781
5 BROOKHAVEN NAT'L LAB	137,657	119,179	112,160	96,384	137,371	118,966	111,522	96,384
6 LINCOLN LABORATORY	135,040	109,640	103,600	87,625	135,040	109,640	103,600	87,625
7 LAWRENCE BERKELEY LAB	130,632	119,740	99,487	67,134	127,094	118,508	98,538	66,037
9 PLASMA PHYSICS LABORATORY	126,027E	94,050	76,213	37,372	125,940E	93,985	76,174	37,2[illegible]
9 FERMI NAT'L ACCELERATOR LAB	83,222	74,303	60,169	51,360	83,222	74,303	60,159	51,360
10 STAN LINEAR ACCELRTR CTR	66,944	80,725	74,643	65,406	66,569	80,725	74,643	65,505
TOTAL, 1ST 10 INSTS.	2,127,835	1,835,302	1,627,347	1,220,352	2,119,203	1,829,971	1,619,624	1,216,424
11 NATL CTR ATMOSPHERIC RES	33,893	35,921	33,640	29,732	33,673	35,756	33,369	29,722
12 AMES LABORATORY	16,754	15,073	12,219	10,639	16,704	15,073	12,219	10,639
13 CENTER FOR NAVAL ANALYSES	14,031	12,665	11,739	10,452	14,031	12,665	11,739	10,431
14 NAT'L RADIO ASTRONOMY OBS	12,032	9,780	8,300	7,795	12,032	9,780	8,300	7,785
15 KITT PEAK NAT'L OBSERVTRY	10,802	9,666	9,281	8,595	10,802	9,666	9,281	8,595
16 OAK RIDGE ASSOCIATED UNIV	7,928	6,128	5,899	5,140	7,901	5,981	5,772	5,015
17 CERRO TOLOLO INTER-AM OBS	4,865	4,028	3,732	3,922	4,865	4,028	3,732	3,972
18 NAT'L ASTRON & IONOS CTR	4,477	4,159	4,256	4,409	4,477	4,159	4,256	4,409
19 SACRAMENTO PEAK OBSERVTRY	2,242	2,075	-	-	2,242	2,075	-	-
TOTAL, 1ST 19 INSTS.	2,236,809	1,934,797	1,716,911	1,301,029	2,224,830	1,929,154	1,709,790	1,296,963
TOTAL, ALL OTHER INSTS.	0	0	0	82,787	0	0	0	80,151

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

section c

university-administered ffrdc's: fy 1980

department of defense

Center for Naval Analyses (University of Rochester).

Lincoln Laboratory (Massachusetts Institute of Technology).

department of energy

Ames Laboratory (Iowa State University of Science and Technology).

Argonne National Laboratory (University of Chicago and Argonne Universities Association).

Brookhaven National Laboratory (Associated Universities, Inc.).

E. O. Lawrence Berkeley Laboratory (University of California).

E. O. Lawrence Livermore Laboratory (University of California).

Los Alamos Scientific Laboratory (University of California).

Fermi National Accelerator Laboratory (Universities Research Association).

Oak Ridge Institute of Nuclear Studies (Oak Ridge Associated Universities).

Plasma Physics Laboratory (Princeton University).

Stanford Linear Accelerator Center (Stanford University).

national aeronautics and space administration

Jet Propulsion Laboratory (California Institute of Technology).

national science foundation

Cerro Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.).

National Astronomy and Ionosphere Center (Cornell University).

Kitt Peak National Observatory (Association of Universities for Research in Astronomy, Inc.).

National Center for Atmospheric Research (University Corporation for Atmospheric Research).

National Radio Astronomy Observatory (Associated Universities, Inc).

Sacramento Peak Observatory (Association of Universities for Research in Astronomy, Inc.).

section d

reproduction of survey instruments

Page

Universities and colleges (includes aggregate data from 563 institutions) 112
University-administered federally funded research and development centers (FFRDC's) (includes data from 19 centers) 116

NSF FORM 411 (Dec. 1980)

FORM APPROVED
OMB No. 3145-0015

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING EXPENDITURES AT UNIVERSITIES AND COLLEGES, FY 1980

(Current and capital expenditures for research, development, and instruction in the sciences and engineering)

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W.
Washington, D.C. 20550
Attn: UNISG

This form should be returned by March 31, 1981. Your cooperation in returning the survey questionnaire promptly is very important.

Financial data are requested for your institution's 1980 fiscal year.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Please correct if name or address has changed

(Includes aggregate data from 563 universities and colleges but excludes 19 university-administered FFRDC's)

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. Exclude data for federally funded research and development centers (FFRDC's). A separate questionnaire is included in this package if your institution administers an FFRDC. If you have any questions please contact Jim Hoehn (202-634-4674).

Please enter the beginning and ending dates of your institution's fiscal year for which you are reporting on this form:

_____ through _____

Please note in space below:
(1) Any suggestions to improve the design of the survey questionnaire; (2) any suggestions to improve the instructions; or (3) any comments on significant changes in research and development programs in your institution.

(Attach additional sheets, if necessary.)

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	AREA CODE	EXCH	NO.	EXT

NAME OF PERSON WHO PREPARED THIS SUBMISSION (If different from above)	TITLE	AREA CODE	EXCH	NO.	EXT

Please check and correct if necessary the name and address of your institution shown on the mailing label. DATE

ITEM 1. CURRENT EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT (R&D) IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS AND BASIC RESEARCH: FY 1980 (Include indirect costs and equipment)

ITEMS 1. & 2. INSTRUCTIONS

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. **Include** scientific research equipment purchased under research project awards from: "current fund" accounts, as defined by OMB Circular A-21, revised, dated February 26, 1979, on Page 30. "Equipment" means any article of nonexpendable tangible personal property having a useful life of more than two years, and an acquisition cost of $500 or more per unit; lower limits may be established, consistent with institutional policy. Also, **include** research funds subcontracted to outside organizations. **Exclude** training grants, public service grants, demonstration projects, and departmental research expenditures that are not separately budgeted.

Under a. **Federal Government.** Report grants and contracts for R&D by all agencies of the Federal Government including reimbursed indirect costs from these sources.

Under b. **State and local governments.** Include funds for R&D from State, county, municipal, or other local governments and their agencies. Include here State funds which support R&D at agricultural experiment stations.

Under c. **Industry.** Include all grants and contracts for R&D from profitmaking organizations, whether engaged in production, distribution, research, service, or other activities. Do not include grants and contracts from nonprofit foundations financed by industry; these should be reported under **All other sources.**

Under d. **Institutional funds.** Report funds which your institution spent for R&D activities including indirect costs from the following sources: (1) General-purpose State or local government appropriations; (2) general-purpose grants from industry, foundations, or other outside sources; (3) tuition and fees; (4) endowment income. In addition, estimate your institution's contribution to unreimbursed indirect costs incurred in association with R&D projects financed by outside organizations, and mandatory cost sharing on Federal and other grants. To estimate unreimbursed indirect costs, many institutions use a university-wide negotiated indirect cost rate multiplied by the base (e.g., direct salaries and wages, etc.) minus actual indirect cost recoveries. If your institution now separately budgets what was previously classified as departmental research, these data should be included in line d.

Under e. **All other sources.** Include foundations and voluntary health agencies grants for R&D, as well as all other sources not elsewhere classified. Funds from foundations which are affiliated with, or grant solely to your institution, should be included under d. Institutional funds. Funds for R&D received from a health agency that is a unit of a State or local government should be reported under State and local governments. Also include gifts from individuals that are restricted by the donor to research.

PLEASE EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, science, and all other nonscience fields.

Source of funds		(1) Total (Dollars in thousands)	(2) Basic research (Percent of column 1)
a. Federal Government	1110	$ 4,092,569	69.6 %
b. State and local governments	1125	492,310	
c. Industry	1150	235,511	
d. Institutional funds	1160	820,940	
(1) Separately budgeted	1161	416,299	
(2) Underrecovery of indirect costs and cost sharing	1162	404,641	
*e. All other sources	1175	407,995	
f. TOTAL (sum of a through e)	1100	$ 6,049,325	66.4 %

Basic research is directed toward an increase of knowledge; it is research where the primary aim of the **investigator** is a fuller knowledge or understanding of the subject under study rather than a practical application thereof.

*Combined data cell (See instructions for b and e).

CONFIDENTIALITY

Information received from individual institutions on lines 1161 and 1162, or estimates for basic research expenditures, will **not** be published or released; only aggregate totals will appear in publications.

Total R&D expenditures reported in line 1100, column (1) and line 1400, column (1) should be the same.
Federally financed R&D expenditures reported in line 1110, columnn (1) and line 1400, column (2) should be the same.

ITEM 2. TOTAL AND FEDERALLY FINANCED EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE: FY 1980 (Include indirect costs and equipment)

Field of science		(Dollars in thousands) (1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1410	$ 862,600	$ 594,547
OPTIONAL (1) Aeronautical & astronautical	1411	[illegible]	[illegible]
OPTIONAL (2) Chemical	1412	[illegible]	[illegible]
OPTIONAL (3) Civil	1413	[illegible]	[illegible]
OPTIONAL (4) Electrical	1414	[illegible]	[illegible]
OPTIONAL (5) Mechanical	1415	[illegible]	[illegible]
OPTIONAL (6) Other	1416	[illegible]	[illegible]
b. PHYSICAL SCIENCES (TOTAL)	1420	679,658	555,332
(1) Astronomy	1421	52,009	37,697
(2) Chemistry	1422	245,610	189,349
(3) Physics	1423	329,151	286,867
(4) Other	1424	52,888	41,419
c. ENVIRONMENTAL SCIENCES (TOTAL)	1430	506,064	371,414
OPTIONAL (1) Atmospheric	1431	[illegible]	[illegible]
OPTIONAL (2) Earth sciences	1432	[illegible]	[illegible]
OPTIONAL (3) Oceanography	1433	139,173	[illegible]
OPTIONAL (4) Other	1434	[illegible]	[illegible]
d. MATHEMATICAL AND COMPUTER SCIENCES (TOTAL)	1440	191,940	137,997
(1) Mathematics	1441	78,408	61,080
(2) Computer sciences	1442	113,532	76,917
e. LIFE SCIENCES (TOTAL)	1450	3,210,687	2,091,836
(1) Agricultural	1451	648,591	197,821
(2) Biological	1452	1,082,578	804,331
(3) Medical	1453	1,379,172	1,020,809
(4) Other	1454	100,346	68,875
f. PSYCHOLOGY (TOTAL)	1460	111,019	81,036
g. SOCIAL SCIENCES (TOTAL)	1470	341,450	182,097
(1) Economics	1471	94,417	44,484
(2) Political science	1472	49,161	21,127
(3) Sociology	1473	88,361	57,374
(4) Other	1474	109,511	59,112
h. OTHER SCIENCES, n.e.c. (TOTAL)	1480	145,907	78,310
i. TOTAL (sum of a through h)	1400	6,049,325	4,092,569

*PLEASE EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

ITEM 2. ILLUSTRATIVE DISCIPLINES

a. Engineering (Total)
- (1) Aeronautical & astronautical — Aerodynamics, aerospace, space technology
- (2) Chemical — Ceramic, petroleum, petroleum refining process
- (3) Civil — Architectural, hydraulic, hydrologic, marine, sanitary and environmental, structural transportation
- (4) Electrical — Communication, electronic, power
- (5) Mechanical — Engineering mechanics
- (6) Other — Agricultural, industrial and management, metallurgical and materials, mining, nuclear, ocean engineering systems, textile, welding

b. Physical sciences (Total)
- (1) Astronomy — Astrophysics, optical and radio, x-ray, gamma-ray, neutrino
- (2) Chemistry — Inorganic, organo-metallic, organic, physical, analytical, pharmaceutical, polymer sciences (exclude biochemistry)
- (3) Physics — Acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma
- (4) Other — Used for multidisciplinary projects within physical sciences and for disciplines not requested separately

c. Environmental sciences (Total)
- (1) Atmospheric — Aeronomy, solar, weather modification, extraterrestrial atmospheres, meteorology
- (2) Earth sciences — Engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology
- (3) Oceanography — Biological oceanography, chemical oceanography, geological oceanography, physical oceanography, marine geophysics
- (4) Other — Used for multidisciplinary projects within environmental sciences

d. Mathematical and computer sciences (Total)
- (1) Mathematics — Algebra, analysis, applied mathematics, foundations and logic, geometry, numerical analysis, statistics, topology
- (2) Computer sciences — Design, development, and application of computer capabilities to data storage and manipulation, information science.

e. Life sciences (Total)
- (1) Agricultural — Agricultural chemistry, agronomy, animal science, conservation, dairy science, plant science, range science, wildlife
- (2) Biological — Anatomy, biochemistry, biophysics, biogeography, ecology, embryology, entomology, genetics, immunology, microbiology, nutrition, parasitology, pathology, pharmacology, physical anthropology, physiology, botany, zoology, veterinary biology.
- (3) Medical — Anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics, ophthalmology, preventive medicine and community health, psychiatry, radiology, surgery, veterinary medicine[1], dentistry, pharmacy
- (4) Other — Used for multidisciplinary projects within life sciences

f. Psychology (Total) — Animal behavior, clinical, educational, experimental, human development and personality, social

g. Social sciences (Total)
- (1) Economics — Econometrics, international, industrial, labor, agricultural, public finance and fiscal policy
- (2) Political science — Regional studies, comparative government, international relations, legal systems, political theory, public administration
- (3) Sociology — Comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and welfare, theory
- (4) Other — History of science, cultural anthropology, linguistics, socioeconomic geography

h. Other sciences, n.e.c. (Total) — To be used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible

1/ Institutions with schools of veterinary medicine should distribute R&D expenditures among the appropriate disciplines (agricultural, biological, and medical) rather than only in medical sciences.

ITEM 3. CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE AND SOURCE OF FUNDS, FY 1980

ITEM 3. INSTRUCTIONS

Please report funds for facilities that were in process or completed during FY 1980. Expenditures for administration buildings, steam plants, residence halls, and other such facilities should be **excluded** unless utilized principally for research, development, or instruction in the sciences and engineering. Land costs should be excluded. Also exclude scientific research equipment purchased under research project awards from "current fund" accounts that are reported under items 1 and 2.

Facilities and equipment expenditures include the following: (a) Fixed equipment such as built-in equipment and furnishings; (b) movable scientific equipment such as oscilloscopes and pulse-height analyzers; (c) movable furnishings such as desks; (d) architect's fees, site work, extension of utilities, and the building costs of service functions such as integral cafeterias and bookstores of a facility; (e) facilities constructed to house separate components such as medical schools and teaching hospitals; and (f) special separate facilities used to house scientific apparatus such as accelerators, oceanographic vessels, and computers.

Field of science		(Dollars in thousands) Total (1)	Federal (2)	All other sources (3)
a. Engineering	1710	$ 91,883	$ 21,440	$ 70,443
b. Physical sciences	1720	77,513	22,717	54,796
c. Environmental sciences	1730	34,136	7,999	26,137
d. Mathematical and computer sciences	1740	31,686	5,680	26,006
e. Life sciences	1750	459,556	86,859	372,697
f. Psychology	1760	17,927	2,029	15,898
g. Social sciences	1770	34,971	1,548	33,423
h. Other sciences, n.e.c.	1780	47,535	3,356	44,179
i. Total (sum of a through h)	1700	$ 795,207	$ 151,628	$ 643,579

NSF FORM 411 (Dec. 1980)

FORM APPROVED
OMB No. 3145-0015

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING EXPENDITURES AT UNIVERSITIES AND COLLEGES, FY 1980

(Current and capital expenditures for research, development, and instruction in the sciences and engineering)

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W.
Washington, D.C. 20550
Attn: UNISG

This form should be returned by March 31, 1981. Your cooperation in returning the survey questionnaire promptly is very important.

Financial data are requested for your institution's 1980 fiscal year.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Please correct if name or address has changed

(Aggregate data from 19 university-administered FFRDC's)

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. **Exclude** data for federally funded research and development centers (FFRDC's). A separate questionnaire is included in this package if your institution administers an FFRDC. **If you have any questions please contact Jim Hoehn (202-634-4674).**

Please enter the beginning and ending dates of your institution's fiscal year for which you are reporting on this form:

_____ through _____

Please note in space below:
(1) Any suggestions to improve the design of the survey questionnaire; (2) any suggestions to improve the instructions; or (3) any comments on significant changes in research and development programs in your institution.

(Attach additional sheets, if necessary.)

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	AREA CODE	EXCH	NO.	EXT
NAME OF PERSON WHO PREPARED THIS SUBMISSION (If different from above)	**TITLE**	**AREA CODE**	**EXCH**	**NO.**	**EXT**
Please check and correct if necessary the name and address of your institution shown on the mailing label.		DATE			

ITEM 1. CURRENT EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT (R&D) IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS AND BASIC RESEARCH: FY 1980 (Include indirect costs and equipment)

ITEMS 1. & 2. INSTRUCTIONS

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. **Include** scientific research equipment purchased under research project awards from "current fund" accounts, as defined by OMB Circular A-21, revised, dated February 26, 1979, on Page 30. "Equipment" means any article of nonexpendable tangible personal property having a useful life of more than two years, and an acquisition cost of $500 or more per unit; lower limits may be established, consistent with institutional policy. Also, **include** research funds subcontracted to outside organizations. **Exclude** training grants, public service grants, demonstration projects, and departmental research expenditures that are not separately budgeted.

Under a. **Federal Government.** Report grants and contracts for R&D by all agencies of the Federal Government including reimbursed indirect costs from these sources.

Under b. **State and local governments.** Include funds for R&D from State, county, municipal, or other local governments and their agencies. Include here State funds which support R&D at agricultural experiment stations.

Under c. **Industry.** Include all grants and contracts for R&D from profitmaking organizations, whether engaged in production, distribution, research, service, or other activities. Do not include grants and contracts from nonprofit foundations financed by industry; these should be reported under **All other sources.**

Under d. **Institutional funds.** Report funds which your institution spent for R&D activities including indirect costs from the following sources: (1) General-purpose State or local government appropriations; (2) general-purpose grants from industry, foundations, or other outside sources; (3) tuition and fees; (4) endowment income. In addition, estimate your institution's contribution to unreimbursed indirect costs incurred in association with R&D projects financed by outside organizations, and mandatory cost sharing on Federal and other grants. To estimate unreimbursed indirect costs, many institutions use a university-wide negotiated indirect cost rate multiplied by the base (e.g., direct salaries and wages, etc.) minus actual indirect cost recoveries. If your institution now separately budgets what was previously classified as departmental research, these data should be included in line d.

Under e. **All other sources.** Include foundations and voluntary health agencies grants for R&D, as well as all other sources not elsewhere classified. Funds from foundations which are affiliated with, or grant solely to your institution, should be included under d. Institutional funds. Funds for R&D received from a health agency that is a unit of a State or local government should be reported under State and local governments. Also include gifts from individuals that are restricted by the donor to research.

PLEASE EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education science, and all other nonscience fields.

Source of funds		(1) Total (Dollars in thousands)	(2) Basic research (Percent of column 1)
a. Federal Government	1110	$ 2,224,830	34.6 %
*b. State and local governments	1125	2,542	
c. Industry	1150	1,706	
d. Institutional funds	1160	1,049	
(1) Separately budgeted	1161	525	
(2) Underrecovery of indirect costs and cost sharing	1162	524	
*e. All other sources	1175	4,682	
f. TOTAL (sum of a through e)	1100	$ 2,234,809	34.6 %

Basic research is directed toward an increase of knowledge; it is research where the primary aim of the **investigator** is a fuller knowledge or understanding of the subject under study rather than a practical application thereof.

CONFIDENTIALITY

Information received from individual institutions in lines 1161 and 1162, or estimates for basic research expenditures, will not be published or released; only aggregate totals will appear in publications.

*Combined data cell (See instructions for b and e).

Total R&D expenditures reported in line 1100, column (1) and line 1400, column (1) should be the same.
Federally financed R&D expenditures reported in line 1110, columnn (1) and line 1400, column (2) should be the same.

ITEM 2. TOTAL AND FEDERALLY FINANCED EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE: FY 1980 (Include indirect costs and equipment)

Field of science		(Dollars in thousands) (1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1410	$ 643,669	$ 639,503
OPTIONAL (1) Aeronautical & astronautical	1411	24,778	24,769
OPTIONAL (2) Chemical	1412	34,183	33,859
OPTIONAL (3) Civil	1413	17,852	17,558
OPTIONAL (4) Electrical	1414	203,657	202,594
OPTIONAL (5) Mechanical	1415	140,309	139,045
OPTIONAL (6) Other	1416	222,890	221,678
b. PHYSICAL SCIENCES (TOTAL)	1420	1,120,095	1,118,128
(1) Astronomy	1421	59,025	59,012
(2) Chemistry	1422	149,212	149,064
(3) Physics	1423	823,797	822,080
(4) Other	1424	88,061	87,972
c. ENVIRONMENTAL SCIENCES (TOTAL)	1430	174,193	172,253
OPTIONAL (1) Atmospheric	1431	35,577	35,280
OPTIONAL (2) Earth sciences	1432	61,815	60,270
OPTIONAL (3) Oceanography	1433	5,929	5,846
OPTIONAL (4) Other	1434	71,672	70,857
d. MATHEMATICAL AND COMPUTER SCIENCES (TOTAL)	1440	161,540	160,230
(1) Mathematics	1441	128,054	127,995
(2) Computer sciences	1442	33,486	32,235
e. LIFE SCIENCES (TOTAL)	1450	75,499	75,060
(1) Agricultural	1451	645	645
(2) Biological	1452	56,106	55,753
(3) Medical	1453	7,734	7,665
(4) Other	1454	11,014	10,997
f. PSYCHOLOGY (TOTAL)	1460	135	135
g. SOCIAL SCIENCES (TOTAL)	1470	17,449	17,422
(1) Economics	1471	9,657	9,647
(2) Political science	1472	2,422	2,419
(3) Sociology	1473	1,500	1,496
(4) Other	1474	3,870	3,860
h. OTHER SCIENCES, n.e.c. (TOTAL)	1480	42,229	42,099
i. TOTAL (sum of a through h)	1400	2,234,809	2,224,830

*PLEASE EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

ITEM 2. ILLUSTRATIVE DISCIPLINES

a. Engineering (Total)	
(1) Aeronautical & astronautical	Aerodynamics, aerospace, space technology
(2) Chemical	Ceramic, petroleum, petroleum refining process
(3) Civil	Architectural, hydraulic, hydrologic, marine, sanitary and environmental, structural transportation
(4) Electrical	Communication, electronic, power
(5) Mechanical	Engineering mechanics
(6) Other	Agricultural, industrial and management, metallurgical and materials, mining, nuclear, ocean engineering systems, textile, welding
b. Physical sciences (Total)	
(1) Astronomy	Astrophysics, optical and radio, x-ray, gamma-ray, neutrino
(2) Chemistry	Inorganic, organo-metallic, organic, physical, analytical, pharmaceutical, polymer sciences (exclude biochemistry)
(3) Physics	Acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma
(4) Other	Used for multidisciplinary projects within physical sciences and for disciplines not requested separately
c. Environmental sciences (Total)	
(1) Atmospheric	Aeronomy, solar, weather modification, extraterrestrial atmospheres, meteorology
(2) Earth sciences	Engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology
(3) Oceanography	Biological oceanography, chemical oceanography, geological oceanography, physical oceanography, marine geophysics
(4) Other	Used for multidisciplinary projects within environmental sciences
d. Mathematical and computer sciences (Total)	
(1) Mathematics	Algebra, analysis, applied mathematics, foundations and logic, geometry, numerical analysis, statistics, topology
(2) Computer sciences	Design, development, and application of computer capabilities to data storage and manipulation, information science
e. Life sciences (Total)	
(1) Agricultural	Agricultural chemistry, agronomy, animal science, conservation, dairy science, plant science, range science, wildlife
(2) Biological	Anatomy, biochemistry, biophysics, biogeography, ecology, embryology, entomology, genetics, immunology, microbiology, nutrition, parasitology, pathology, pharmacology, physical anthropology, physiology, botany, zoology, veterinary biology.
(3) Medical	Anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics, ophthalmology, preventive medicine and community health, psychiatry, radiology, surgery, veterinary medicine[1], dentistry, pharmacy
(4) Other	Used for multidisciplinary projects within life sciences
f. Psychology (Total)	Animal behavior, clinical, educational, experimental, human development and personality, social
g. Social sciences (Total)	
(1) Economics	Econometrics, international, industrial, labor, agricultural, public finance and fiscal policy
(2) Political science	Regional studies, comparative government, international relations, legal systems, political theory, public administration
(3) Sociology	Comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and welfare, theory
(4) Other	History of science, cultural anthropology, linguistics, socioeconomic geography
h. Other sciences, n.e.c. (Total)	To be used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible

1/ Institutions with schools of veterinary medicine should distribute R&D expenditures among the appropriate disciplines (agricultural, biological, and medical) rather than only in medical sciences.

ITEM 3. CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE AND SOURCE OF FUNDS, FY 1980

ITEM 3. INSTRUCTIONS

Please report funds for facilities that were in process or completed during FY 1980. Expenditures for administration buildings, steam plants, residence halls, and other such facilities should be excluded unless utilized principally for research, development, or instruction in the sciences and engineering. Land costs should be excluded. Also exclude scientific research equipment purchased under research project awards from "current fund" accounts that are reported under items 1 and 2.

Facilities and equipment expenditures include the following: (a) Fixed equipment such as built-in equipment and furnishings; (b) movable scientific equipment such as oscilloscopes and pulse-height analyzers; (c) movable furnishings such as desks; (d) architect's fees, site work, extension of utilities, and the building costs of service functions such as integral cafeterias and bookstores of a facility; (e) facilities constructed to house separate components such as medical schools and teaching hospitals; and (f) special separate facilities used to house scientific apparatus such as accelerators, oceanographic vessels, and computers.

Field of science		(Dollars in thousands) Total (1)	Federal (2)	All other sources (3)
a. Engineering	1710	$ 41,895	$ 41,792	$ 103
b. Physical sciences	1720	236,088	235,145	943
c. Environmental sciences	1730	13,133	13,100	33
d. Mathematical and computer sciences	1740	9,836	9,836	0
e. Life sciences	1750	6,852	6,852	0
f. Psychology	1760	0	0	0
g. Social sciences	1770	700	700	0
h. Other sciences, n.e.c.	1780	1,187	1,187	0
i. Total (sum of a through h)	1700	$ 309,691	$ 308,612	$ 1,079

other science resources publications

Science Resources Studies Highlights

	NSF No.	Price
R&D Funds		
"National R&D Spending Expected to Approach $80 Billion in 1982"	81-314	-----
"Real Growth in Industrial R&D Performance Continues into 1979"	81-313	-----
S/E Personnel		
"Engineering Colleges Report 10% of Faculty Positions Vacant in Fall 1980"	81-322	-----
"Trends in Science and Engineering Degrees, 1950 Through 1980"	81-320	-----
"Scientist and Engineering Faculty with Recent Doctorates Fell to One-Fifth of Total in 1980"	81-318	-----
"University S/E Faculty Spend One-Third of Professional Time in Research"	81-317	-----
"Employment Opportunities for Ph.D. Scientists and Engineers Shift From Academia to Industry"	81-312	-----
"Tenure Practices in Universities and 4-Year Colleges Affect Faculty Turnover"	81-300	-----
"Employment of Scientists and Engineers Increased Between 1976 and 1978 But Declined in Some Science Fields"	80-305	-----

Detailed Statistical Tables

	NSF No.	Price
R&D Funds		
Federal Funds for Research and Development, Fiscal Years 1980, 1981, and 1982, Volume XXX	81-325	-----
Research and Development in Industry, 1979. Funds, 1979; Scientists and Engineers, January 1980	81-324	In press
Research and Development in State and Local Governments, Fiscal Years 1977	79-327	-----
S/E Personnel		
Scientists, Engineers, and Technicians in Private Industy, 1980	81-329	In press
Federal Scientific and Technical Personnel, 1976, 1977, and 1978	81-309	-----
Scientists and Engineers From Abroad, 1976-78	80-324	-----
Characteristics of Doctoral Scientists and Engineers in the United States, 1979	80-323	-----
U.S. Scientists and Engineers, 1978	80-304	-----
Characteristics of Experienced Scientists and Engineers, 1978	79-322	-----

Reports

	NSF No.	Price
R&D Funds		
Federal Funds for Research and Development, Fiscal years 1979, 1980, and 1981, Volume XXIX	81-306	$3.75
Problems of Small, High-Technology Firms	81-305	In press
S/E Personnel		
Activities of Science and Engineering Faculty in Universities and 4-Year Colleges, 1978/79	81-323	In press
Young and Senior Science and Engineering Faculty, 1980	81-319	-----
Foreign Participation in U.S. Science and Engineering Higher Education and Labor Markets	81-316	$4.50
Science and Engineering Employment, 1970-80	81-310	$2.75
The Stock of Science and Engineering Master's Degree-Holders in the United States	81-302	-----
Employment Attributes of Recent Science and Engineering Graduates	80-325	$1.75
Occupational Mobility of Scientists and Engineers	80-317	$1.75
Employment Patterns of Academic Scientists and Engineers, 1973-78	80-314	$1.75
Composite		
National Patterns of Science and Technology Resources, 1981	81-311	$4.75
Science and Engineering Personnel: A National Overview	80-316	$4.25